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ABSTRACT

A study identified and conducted onsite case studies of 18 different education programs conducted by small companies. Two-thirds of them were conducted by manufacturing companies; the remainder were in health services, construction, or transportation companies. Most of the programs served fewer than 25 workers and had been in operation for less than 1 year. Typical programs addressed workers' basic skills needs; most offered classes in English, English as a Second Language (ESL), mathematics, and high school equivalency test preparation. Most programs relied on workbooks from basic education classes; instructional techniques varied. The defining features that all 18 programs had in common were as follows: (1) active involvement of management; (2) targeting production or hourly workers; and (3) a substantial link to the workplace. The companies usually started their programs because someone made it easy for them to do so, rather than because of a strong internal motivation, and because providing such programs enhanced their public image. The companies supported the programs because of their concerns for safety, product quality, productivity, promotability, and workers' personal development. Employers and employees alike were enthusiastic about the programs. Recommendations were made to inform educators of the needs of small businesses and to make programs affordable. (Appendixes include profiles of small business efforts in workplace education, sources of assistance, and a 74-item bibliography.) (KC)

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**WORKPLACE EDUCATION EFFORTS
IN SMALL BUSINESS:
LEARNING FROM THE FIELD**

FINAL REPORT

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WORKPLACE EDUCATION IN SMALL BUSINESS

Executive Summary

By the early years of the 21st century, market forces will almost certainly ensure that the quality of jobs and the incomes they produce exactly match the quality of the American workforce. We have a choice between a high-income, high-productivity nation based on a high-quality workforce, or a second-class economy based on a second-rate workforce. The fate of the twenty million-plus [persons who have not mastered basic skills] is one of the major factors that will determine which of these two alternative futures comes to pass.¹

Concerns about the overall vitality and competitiveness of the U. S. economy have prompted a strong current and recent interest in workplace education programs. Workplace education programs are employer-sponsored efforts to provide educational opportunities to production or hourly workers; they include both literacy and pre-GED programs, and they are distinguished from job training by the generalizable nature of what is learned.

Employers have involved themselves in workplace education in a number of ways: reimbursing tuition, referring workers to the local education system or literacy programs, providing space for an outside instructor to offer a class before or after employees' workday or during the lunch break, and participating actively in designing and implementing an on-site program that teaches basic skills.

Small employers -- those with fewer than 500 employees -- are the source of about half of all jobs in our economy and are thus at the center of any trends or challenges facing the economy as a whole. Small businesses are the most likely to have

¹Chisman, Forrest P., Jump Start: The Federal Role in Adult Literacy, Southport Institute for Policy Analysis, Southport, CN, January 1989.

a need for worker education: on average their workers are more likely than others to have low levels of formal education. Small companies' workload often necessitates that workers be flexible and able to learn each others' jobs and acquire new skills quickly. Finally, as the predominant provider of workers' **first** jobs, small companies often serve as providers of general training which benefits the economy as a whole, as workers go on to better-paying jobs in large companies. However, few small businesses are in a position to cover the full cost of investing in basic skills for their workers. They have limited resources to pay for the management time to plan and set up training on-site; equally difficult is paying workers to take time away from their duties to participate in training. Thus both the need for workplace education and the barriers to undertaking it are most pronounced among small companies.

At present, the bulk of national attention being devoted to workplace education -- in terms of research, legislation, and grant funding -- is geared to meeting the needs of large employers. And almost nothing is known about whether or not such efforts in fact filter down to affect small business operations. To respond to this information gap, the U. S. Small Business Administration contracted with Berkeley Planning Associates to explore those instances in which small employers have successfully undertaken programs to enhance workers' basic skills.

This study identified and conducted on-site case studies of 18 different programs operated by small companies. Two-thirds of them were in manufacturing companies; the remainder were in health services, construction, or transportation companies. Most of the programs served fewer than 25 workers and had been in operation for less than one year. All of the companies relied on outside professionals, operating through federally- or state-funded programs, to plan and set up the programs and to teach the classes.

WORKPLACE EDUCATION PROGRAMS: A GENERAL DESCRIPTION

The typical program addressed workers' basic skills needs; specific content areas varied across the 18 programs. The majority of the programs offered classes in English, English as a Second Language (ESL), math, and preparation for the GED examination. (Where basic literacy training was needed, it was generally arranged individually through a local volunteer tutoring organization.) Most programs relied on workbooks taken from general literacy or adult basic education classroom. Some consisted of standard ESL curriculum and materials; others were tailored to include job-related vocabulary and examples drawn taken from the workers' own jobs.

The programs varied in the instructional techniques they used. The format most frequently encountered was one in which the members of a class worked independently of each other on a self-paced basis, reading or completing lessons in a workbook, with an instructor ready to give assistance as needed. Other classes relied more on group interaction, such as discussing a work problem and then writing down suggested solutions. In some companies the participants themselves were instrumental in identifying the content and direction of the class, working in small groups led by a teacher or co-worker facilitator.

The programs were diverse in many other ways. Specifically, they varied as to who planned them, who were the instructors, when they were held, how large they were, whether they were ongoing or had a scheduled beginning and end, who was allowed or required to participate, and how participation was rewarded, encouraged, or permitted.

The defining features that all 18 programs had in common were: (1) *active involvement on the part of management* -- going beyond minimal efforts such as referring workers to an outside resource; (2) *targeting production or hourly workers* rather than professionals or managers; and (3) *a substantial link to the workplace* -- classes held

on-site, company providing materials, meeting space, paid or unpaid release time during the normal workday, and other types of support.

Once an employer has decided to implement a program, several crucial steps need to be taken. These are depicted in the Overview chart on page v below, which also shows some of the key factors involved in company decision-making in workplace education.

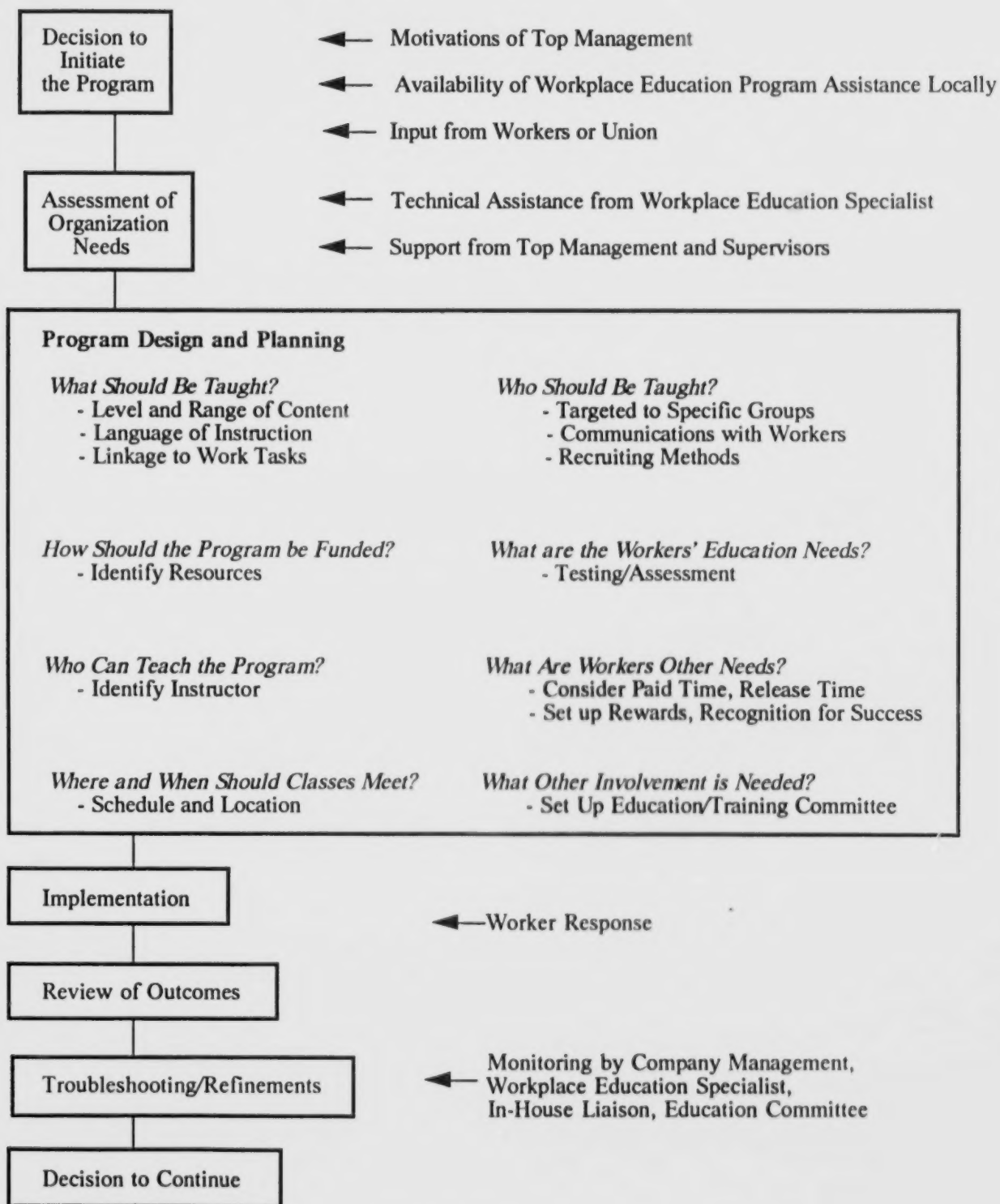
The degree of company involvement in the process was substantially different from firm to firm. Unlike large companies who have a specialized education and training director, many of the case study firms had limited involvement in designing the program, leaving most decisions to the discretion of outside workplace education specialists.² Others formed committees which included workers and supervisors, along with the human resource (personnel) manager who typically acted as the primary points of contact assisting the workplace education specialist.

WORKPLACE EDUCATION PROGRAMS: WHY COMPANIES PARTICIPATE

Few of the companies studied initiated their programs because of a strong internal motivation; rather they got involved because someone made it easy for them to do so. Typically a workplace education specialist had approached them and offered a no-cost and "no-hassle" program that sounded like a good idea. Employers recognized many of the arguments used in selling the program to them as familiar echoes of a recently-read

²We have used the term "workplace education specialist" or sometimes "work force specialist" to denote an outside service professional who serves as an important catalyst in the development of workplace education programs. It refers to the person that performs such crucial functions as: convincing the company to undertake a program, acting as a consultant throughout the planning and start-up phases, helping recruit and test participants, arranging for an instructor, and following the progress of the program at least during the early stages of full operation. Typically, this person is on the staff of a service organization or education agency which has funding to support these consultation efforts.

Overview of the Steps in a Workplace Education Program



article in a newspaper or trade publication, citing worker scarcity and the threat to global competitiveness. And finally, what was being offered was congruent with the employer's image of the company as a "good employer" who cared about the workers enough to invest in their future.

Recent media reports have pointed to skills deficiencies among workers seeking entry-level jobs, which they trace to the failure of the public school system, as reasons for supporting workplace education. By contrast, the employers contacted in this study cited different reasons for being enthusiastic about their programs: safety, product quality, productivity, promotability, and workers' personal development.

IMPORTANT ISSUES AFFECTING WORKPLACE EDUCATION PROGRAMS

The Risk of Turnover

Small business managers have been warned that their characteristic high turnover rates make it doubly risky to invest in workers' skills, particularly transferrable skills which the worker can use to negotiate a higher-paying job in another company. And yet the flexibility and problem-solving ability required to succeed in a small business are most enhanced by the kind of general education program which most case study companies were conducting. Many of the employers interviewed did not appear to be particularly concerned about employee turnover. They tended to see worker education as preparing employees to take on more responsibility within the company, to become more promotable, or to become more flexible and able to take on new assignments. That improved capability represents a clear-cut benefit to the company as well as the worker. However, employers also recognized an equal probability that the worker's education and training will prepare him or her to make a job change, and that change will certainly represent a loss to the employer. Nonetheless, they felt that in the intervening months or years before leaving the company, the employee would give more to the job, care more about the job, and be more engaged in his or her work than ever before. The

challenge then is to maximize the payoff period by making good use of those new skills and rewarding the worker with salary increases, recognition for accomplishments, and a positive work environment.

Program Costs

One often-cited barrier to program start-up is cost. Initial program development is time consuming and can be expensive. None of the programs studied would have been able to begin operations without the expertise and the initial investment of planning and time made by a publicly-supported service professional. In other words, lack of staff time and knowledge needed to start programs proved as important a barrier as costs per se. However, given the positive influence of workplace education programs on the firm, roughly half of the employers indicated that they would be willing to pay 100% of instructional costs -- teacher time, books and other materials, which can range from \$2.00 to \$9.00 per student per hour of participation -- in order to continue their programs.

Indicators of Program Success

The most concrete indication of program success is employer interest in continuing program offerings. All firms participating in the study plan to continue their programs. Many expressed a willingness to absorb an increased proportion of out of pocket expenses associated with program implementation. Employers often noted completion rates and the number of participants successfully completing the GED exam as well feedback gained from informal conversations with supervisors and participants as a means of assessing program effectiveness. On their part, worker participants expressed a strong desire to have programs continued and interest in being able to participate in additional course offerings.

RECOMMENDATIONS

Interview respondents pointed to several steps which federal policy makers and others can take to help generate more and more successful workplace education programs in small business. Specifically:

- (1) Training which will increase awareness among educators and service professionals about the needs and constraints that small business managers confront, such as a lack of suitable space to set up a classroom, or an inability to free up workers to attend classes.
- (2) Efforts to spread the word about solutions to some of the typical small business barriers to implementing workplace education programs. Some of the suggestions were a "help line" and increased use of existing publications to provide technical assistance.
- (3) Sliding scale fee structures that favor small businesses.
- (4) Support for legislation which reinforces the importance of workplace education.
- (5) Increased knowledge about effective practices will be helpful: systematic research on the outcomes of alternative types of programs, and honoraria and expenses for small business representatives to attend conferences and workshops
- (6) Funding, which could take the form of a tax credit; a targeted payroll tax; demonstration program funding to emphasize small business programs; a revolving loan fund to cover start-up costs; and matching grants to induce targeting of private funds to workplace education programs.
- (7) Flexibility in using existing funding (e.g., for job training, adult basic education, vocational education, and ESL) to alleviate gaps in the current system for enhancing the skills of our current and future workforce.

I. INTRODUCTION

This report summarizes the findings of a 1990 study of workplace literacy programs in small business settings, carried out by Berkeley Planning Associates for the U.S. Small Business Administration. The purpose of the study was to discover and describe examples of workplace literacy programs being conducted in small business, and to learn from those programs lessons which might be helpful to other employers.

THE BASIC SKILLS GAP AND BUSINESS COMPETITIVENESS

THE LITERACY GAP: To close it -- and to open the eyes of millions of workers -- U.S. companies are spending hundreds of millions every year as educators of last resort.

-- Headline from Time Magazine¹

The above quote is an example of the many headlines which have reflected business concern and awareness of literacy issues over the past several years. Underlying this concern are gradual but fundamental shifts in the demographics of the U.S. labor force and in the skills requirements for jobs. For example, the Hudson Institute's groundbreaking Workforce 2000 report pointed to two simultaneous labor market trends:

- (1) Over half the new jobs created during the 1990s will require post-secondary training; only 14% of these jobs will be available to workers who have not completed high school.
- (2) Declining population growth means that relatively few workers are expected to enter the labor force over the next decade; 85% of net new

¹"The Literacy Gap," Time, December 19, 1988.

workers will be women, recent immigrants, or members of minority groups. These groups have historically received relatively little education and training.

Taken together, these trends point to a need to develop higher levels of skills in the workforce, particularly among production or hourly workers who have not yet had an opportunity to develop those skills.² Publication of the report was immediately followed by news articles, speeches, and additional reports for a variety of audiences, including the business community. The concern over literacy became visible and widespread; awareness of the problem grew quickly. The following are just a few examples of reports in the print media and elsewhere:

- A Washington Post article cites technological change and related changes in work requirements as the impetus for many companies' involvement in workplace education. "For example, many older workers, who had performed adequately in the same job for many years, suddenly were asked to do multiple jobs on highly automated machines. After years of not having to use rudimentary math and reading skills, workers in both manufacturing and service industries watched the skills required to do their job change drastically."³
- "Right now there's a particularly critical supply-demand disjuncture facing American business: the growing gap between the demands of the contemporary job market and the skills offered by those coming into the labor force." John Carter, President and CEO of The Equitable Financial

²Arnold E. Packer and William B. Johnston, Workforce 2000: Work and Workers for the Twenty-first Century. Report to the U.S. Department of Labor, Indianapolis: Hudson Institute, June 1987.

³"The Company as Educator: Firms Teach Workers to Read, Write," Washington Post, September 22, 1989.

Companies, stated: "Basic skill deficiencies -- problems in reading and writing, difficulties in listening and calculating -- impose substantial costs to employers, not only in the form of educational expenses, but also through lower productivity, higher supervisory costs, and reduced product quality."⁴

- "Over the past decade, the rest of the world has gradually caught up to -- and in many cases passed -- the United States in basic manufacturing. Many American corporations simply cannot compete against nations where workers are paid a few dollars a day. In order for its standard of living to grow, this nation needs to shift from an economy dependent on assembly line manufacturing in large, stable firms to a flexible economy based on knowledge and technological innovation."⁵
- A New York Times article cited the example of New York Telephone Company, which in 1987 "had to test 57,000 people before it could find 2,100 who were qualified to become operators and repair technicians."⁶
- Over the past fifteen years, numerous large companies (e.g., Parker Pen, American Express, Tenneco, Shell, and General Electric) and coalitions of companies in many cities (e.g., Boston, Philadelphia, Baltimore, New York, and Atlanta) have developed partnerships with educators in order to improve workers' basic skills and workforce readiness. They have

⁴"Business and Education: The Demand for Partnership" in Business Week, May 2, 1988.

⁵National Alliance of Business, Shaping Tomorrow's Workforce: A Leadership Agenda for the 90's, Washington, D.C. 1988.

⁶"Companies Step In Where the Schools Fail," New York Times, September 26, 1989.

done so because they recognized deficiencies in the current and emerging entry-level workers.⁷

- Carlton Braun, Vice President of Motorola Inc., testified in 1988 before the Joint Economic Committee, saying that Motorola spends 60% of its training budget on remedial training in basic math and reading skills. The company is "fighting for survival" because of fierce international competition.⁸
- One industry-wide publication stated: "The Department of Education estimates that there are about 27,000,000 adult Americans who can't really read. Almost all of them can sign their names and maybe spell out a headline. Most aren't totally illiterate the way we used to define illiteracy. But they can't read the label on a medicine bottle. Or fill out a job application. Or write a report. Or read the instructions on the operation of a piece of equipment. Or the safety directions in a factory. Or a memo from the boss. Maybe they even have trouble reading addresses in order to work as a messenger or deliveryman. Certainly they can't work in an office."⁹

Messages such as those cited above have been heard by a large segment of the business community. The Business Council on Effective Literacy, formed in 1984, serves as an information clearinghouse, publishes a quarterly Newsletter which stands as one of the most useful and current resources in the field. Companies nationwide have become

⁷National Alliance of Business, The Fourth R: Workforce Readiness, Washington, D.C., 1987.

⁸"Employers See Fewer Qualified New Workers, Skills Dropping, Study Says," Employment and Training Reporter, Washington, D.C., July 13, 1988, pp. 1067-1068.

⁹Lacy, Dan, "American Business and the Literacy Effort," PIA Communicator, November 1985, pp. 10-12.

involved in education issues, adopting schools, entering into coalitions which form local "Compacts" (modeled on the pioneering Boston Compact) to encourage achievement in high school. And many companies, particularly large ones, have taken on the task of providing basic skills training for employees. Some have even provided training for prospective employees. When the pool of available job applicants shrank in Hartford, Connecticut, Aetna Life & Casualty Company was unable to fill clerical job openings. The company began offering a basic business skills class to unemployed persons. Company employees are also allowed to attend, either on their own on a confidential basis, or with their department's sponsorship, including release time.

How Real is the Skills Gap?

For the most part, the business community's concern has been directed at the perceived deficiencies that non-college-educated workers bring to the workplace. In fact, about 20% of Americans lack a high school diploma; the rate is twice as high for blacks as it is for whites, and nearly three times as high for Hispanics. Self-reported illiteracy (inability to read a simple message) based on Census counts is quite low -- less than 1% of the adult population -- but that figure drastically understates the extent of basic illiteracy (defined in terms of objective criteria such as reading level) or functional illiteracy (defined in terms of ability to function successfully in the workplace, the home, and the community). Functional illiteracy was estimated in the late 1970s at between 13% and 25% of persons over 15 years of age.¹⁰ The figure most commonly cited today is 27 million persons.¹¹ The skills gap is real; it has been in the news for over three years. However, the gap is neither as deep or as wide as the headlines have predicted. What may be more alarming is the gap in the U.S. economy.

¹⁰Barnow, Burt S., The Education, Training, and Work Experience of Adults in the Labor Force from 1984 to 1995, ICF Inc. Report to the National Commission for Employment Policy, Washington, D.C., 1985.

¹¹Lee, Chris, "The Three Rs," Training, October 1989, pp. 67-72.

The Competitiveness Argument

In the summer of 1990, another report attracted as much attention as Workforce 2000 had three years earlier. America's Choice reinforces the concern that American companies may face disadvantages in global competition, but the reasoning is different and the proposed solutions have changed.¹² That report, based on interviews with over 2,000 employers, concludes that our standard of living is in jeopardy unless we make fundamental changes in our economy. The authors make a strong case for giving higher priority to the basic skills and training needs of currently-employed workers and persons entering the workforce. The argument emphasizes not so much the skill deficiencies of the workforce as the potential gains to continued training.

We devote 90% of our educational resources on people during the first fifteen to twenty years of life," stated the Commission's Chair, Ira Magaziner. "We wrongly assume that little learning will be required during the subsequent forty to fifty years of working life."¹³

The report urges American companies to re-think the current outmoded form of organization to allow more independent judgment by front-line workers.

The guiding principle is to reduce bureaucracy by giving autonomy to front-line workers for a variety of tasks. Workers are asked to use judgment and make decisions rather than follow, by rote, cumbersome procedures spelled out in detail ... Management layers disappear as front-line workers take over many of the tasks -- from quality control to production scheduling -- that others used to do. Tasks formerly performed by dozens of unskilled individuals are now performed by fewer highly skilled ones.¹⁴

¹²Commission on the Skills of the American Workforce, America's Choice: High Skills or Low Wages!, National Center on Education and the Economy, Rochester NY, June 1990.

¹³Ibid.

¹⁴Ibid.

Workers in this system will need improved skills in order to become more productive, with employers participating in the education and training process. Currently, only a small fraction of firms make a significant investment in training workers. About 90% of the estimated \$30 billion companies invest in training comes from only 15,000 companies -- one-half of one percent of all United States companies.¹⁵ Instead, the report urges, the U.S. should have all employers assure a high-skills future by allocating at least 1% of their payroll to the formal education and training of their workers, or contribute that amount to a general training fund to be used by the states to upgrade workers' skills.

Not everyone views the problem in the same way, however. Many of the executives interviewed in a Philadelphia study were unaware of any literacy problem per se, but rather found increasing problems in recruiting qualified employees. They see these as a consequence of lowering unemployment rates, and see the solutions as being actions such as: offering higher rates of pay for entry level jobs, lowering employee selection standards, accepting a decline in the standard of service, and tolerating turnover. One exception was the executive who stated: "...The requirements of entry level work are changing and are pushing all of us in a direction where verbal skills, written skills, math skills are really important in those entry level positions." The executives interviewed fell into three groups: a few in favor of making only those minimal changes required to get the job done, a substantial group willing to invest in training to meet specific company-defined goals, and a limited number who took a broader view of the company's role in developing not only work skills but also life skills among workers.¹⁶

¹⁵Ibid. Also in Anthony P. Carnevale and Leila J. Gainer, The Learning Enterprise, American Society for Training and Development, Alexandria, VA, 1989.

¹⁶Omega Group, Inc, "Literacy in the Workplace: The Executive Perspective," Haverford, PA, 1989.

THE PUBLIC INTEREST IN BASIC SKILLS AND COMPETITIVENESS

The New York Times reported that "many of the students who are most at risk are children from minority groups, the same youngsters who the Labor Department says will fill 56% of the new jobs that will open up between 1986 and the year 2000...America is developing into a nation of educational haves and have-nots, who are fast becoming employment haves and have-nots; ... this polarization follows racial lines, and ... the effect on the economy and the country could be devastating."¹⁷

Studies by Lillard and Tan,¹⁸ Bishop¹⁹ and others consistently indicate that people who receive formal training on the job have a substantial advantage in earnings -- 25% or more -- over people who do not. Lillard and Tan go on to cite the earnings effects of training received on a prior job: an increase of 18% - 20%. Several studies (including one Ford Foundation study by Sum and Berlin²⁰) have shown that the relationship between earnings levels and basic skills is strong and strengthening over time. Even among workers with the same number of years in school, those with very low scores on basic skills tests on average earned half as much as those who scored high.

Forrest Chisman argues, in the acclaimed report, Jump Start: The Federal Role in Adult Literacy²¹ "By the early years of the 21st century, market forces will almost

¹⁷Fiske, Edward B., "Impending U.S. Jobs 'Disaster': Work Force Unqualified to Work," New York Times, September 25, 1989, p. 1.

¹⁸Lillard, L. and Tan, H. W., "Private Sector Training: Who Gets It and What Are Its Effects?" Rand Corporation Report to the U.S. Department of Labor, Santa Monica, CA, 1986.

¹⁹Bishop, J., On the Job Training in Small Business, U.S. Small Business Administration, Washington, D.C., 1982.

²⁰Sum, A. and Berlin, G. "Toward a More Perfect Union: Basic Skills, Poor Families and Our Economic Future," Ford Foundation, New York, 1988.

²¹Chisman, Forrest P., Jump Start: The Federal Role in Adult Literacy, Southport Institute for Policy Analysis, Southport, CN, January 1989.

certainly ensure that the quality of jobs and the incomes they produce exactly match the quality of the American workforce. We have a choice between a high-income, high-productivity nation based on a high-quality workforce, or a second-class economy based on a second-rate workforce. The fate of the twenty million-plus [who have not mastered basic skills very well] is one of the major factors that will determine which of these two alternative futures comes to pass." He goes on to make the point that the economy, by about the year 2010, will need to be strong enough to support the retirement needs of some 75 million members of the "baby boom" generation, based on the productivity of a vastly smaller workforce.

The overall health and vitality of the economy is a strong source of the public sector's interest in encouraging workplace education. Encouraging equality of opportunity for groups traditionally at a disadvantage in the labor market is another area of public concern. Both of those are, in the terminology of economists, "public goods," namely goods which do not benefit an individual company, and therefore goods for which an individual company may not be willing to pay. Gary Becker, in his theoretical analysis of human capital development, also argues that companies have no incentive to provide "general" training, which is equally useful to the worker in another company (including general education or literacy training).²² Chisman adds that this disincentive is strongest (or an investment in training is riskiest) when considering relatively unskilled workers, who have traditionally high turnover rates.²³

Finally, if the public interest requires action to foster the health and development of small businesses, it requires action to enhance workers' basic skills. Small businesses are the least able to afford investments in the actual costs of worker training -- particularly general or transferrable training -- the least able to afford the management

²²Becker, Gary S., Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education, National Bureau of Economic Research, New York, 1964.

²³Chisman, Forrest P., op. cit.

time to plan and set up training on-site, and the least able to afford for workers to take time away from their duties to participate in training. Small businesses are characterized by higher turnover rates than their larger counterparts, making such investments doubly risky.²⁴ And small businesses are the most likely to have a need for worker education. Their workers are generally the least skilled. The companies' small size often necessitates that workers be flexible and able to learn each others' jobs and acquire new skills quickly.

SMALL BUSINESS AND THE CONCERN FOR BASIC SKILLS

Small employers (those with fewer than 500 employees) are the source of about half of all jobs in our economy; they generate about 40% of all new jobs being created each year.²⁵ Thus they are at the center of any trends or challenges facing the economy as a whole. Two out of every three new workers gets his or her first job in a small company.²⁶ This fact places an extraordinary burden on small employers who must (1) guess, based on limited evidence, which applicants can and will become productive workers, (2) teach new workers how to adjust to the expectations of the workplace, and (3) figure out how to circumvent or correct any skill deficiencies these workers bring with them. As the first employer, small firms are also the most likely to hire workers with low levels of education or basic skills. A Wall Street Journal article pointed out the growing disadvantage small businesses face in competing for employees, and the high cost of the search for qualified workers. Already faced with a squeeze because of

²⁴Drury, David A., Labor Turnover and Worker Mobility in Small and Large Firms. For the U.S. Small Business Administration, Office of Advocacy, Oakland, CA: Berkeley Planning Associates, 1988.

²⁵U.S. Small Business Administration, The State of Small Business: A Report to the President. Washington, D.C.: Government Printing Office, 1989.

²⁶U.S. Small Business Administration, "Job Training in Small and Large Firms." Washington, D.C., 1988, as cited by Paul Jurmo in his presentation: "Workplace Education: Beyond the 'Quick Fix'" at the conference "Workplace Education: Today and Tomorrow," A Statewide Conference, Worcester, Massachusetts, March 22, 1990.

relatively low wages and fringe benefits, small businesses are expected to be hardest hit by the projected dwindling supply of young workers. One result is that small businesses may find themselves needing to invest more and more in formal training.²⁷

On the other hand, small employers are less likely than others to be able to afford the lost time needed for training (particularly formal training) to occur during working hours. They are also less likely to have the administrative resources to invest in training. The third frequently-cited barrier to training is the traditionally high turnover rate found in small business.²⁸ As a result, small employers are less likely than large companies to provide training for new workers, and less than half as likely to provide formal training. Instead, workers in small firms receive whatever training they get off the job, and are relatively unlikely to have it paid for by their employers.²⁹ In fact, only 9.3 percent of small employers offer remedial basic skills for their employees; among companies with more than 10,000 employees, the proportion is about three times as great. A larger proportion of companies test job applicants for basic skills, but they have until now used test results as a basis for screening out unqualified applicants rather than to diagnose a need for training.³⁰

At present, however, the bulk of national attention being devoted to workplace education (research, legislation, grant funding) is geared to meeting the needs of large employers. And almost nothing is known about whether or not such efforts in fact "filter

²⁷Marsh, Barbara, "Small Firms' Disadvantage in Hiring Likely to Grow," Wall Street Journal, November 27, 1989, p. B1.

²⁸David A. Drury, Labor Turnover and Worker Mobility in Small and Large Firms. For the U.S. Small Business Administration, Office of Advocacy. Oakland, CA: Berkeley Planning Associates, 1988.

²⁹Bishop, J., On the Job Training in Small Business, U.S. Small Business Administration, Washington, D.C., 1982.

³⁰Lee, Chris, "The Three Rs," Training, October 1989, pp. 67-72.

down" to affect small business operations. Thus, the information gap which prompted the present BPA study is both very large and very important.

WORKPLACE LITERACY PROGRAMS -- SOLUTION TO THE SKILLS GAP

The present BPA study was based on the premise that workplace literacy programs -- programs designed to help workers with basic skills (reading and math) along with higher-level skills (critical thinking) and job-related skills (blueprint reading) - are as important to small business competitiveness as large companies have found them to be. In order to frame our inquiry correctly, we begin with a discussion of what professionals in the field mean by workplace literacy.

Defining Workplace Literacy

Estimates of functional illiteracy within the U.S. population vary widely. The SBA's publication Focus on the Future: Small Business in the 1990s notes studies which estimate illiteracy within the U.S. from 0.5% to 50%.³¹ The discrepancy in findings is due, in large part to the inconsistency of measures used to determine literacy as well as changes in perception over time as to what constitutes literacy.

A spokesman for the UAW-Ford Motor Company Employee Development and Training Center explained the ways that basic skills deficiencies can get in the way of satisfactory job performance.

What it takes to be functionally literate has changed -- the reading, interpreting and math skills that were sufficient 20 years ago are not adequate anymore. Statistical process control requires reading and writing. And with fewer foremen, the nature of the job has changed: employees often are responsible for filling out requests for supplies,

³¹U.S. Small Business Administration, Office of the Chief Counsel for Advocacy, Focus on the Future: Small Business in the 1990s, The 10th National Legislative Conference on Small Business Issues, San Francisco, CA, December 1989.

*leaving notes for the next shift on the line, and a variety of other tasks that demand communication skills.*³²

Typical measures of functional literacy include self-reporting of the ability to read and write, grade level completion, reading level/or grade level equivalent as measured by standardized tests, and skills based assessments. Estimates using grade level completion, or grade level equivalency vary in their assessment of what constitutes literacy; some use completion of grade 6 as the threshold point or the criterion for distinguishing between functional literacy and illiteracy, others the completion of grade 8, and still others the completion of 10th or 12th grade. Grade level indicators of what constitutes literacy change over time. It has been argued that this is in part due to the increased demands of a complex society as well as the increased expectations which result from an increasingly well educated population.

Definitions of workplace literacy usually begin with a focus on basic skills -- reading, writing, and computation -- and expand to include such things as team building, problem solving, and leadership. While attempts to define workplace literacy in terms of grade level have been made in the past, we quickly came to believe that grade level equivalencies have little generalizable value in the workplace. As one of our small business respondents pointed out, the notion that people will have mastered a given body of skills by a certain grade is an idealized notion with no single defined meaning.

In addition, experts and practitioners have found that people apply skills outside of the classroom in very different ways than skills are used within an academic structure. As Thomas Sticht points out, "One of the major differences between the schools and the workplace is that the latter permits employees to work together on tasks. If one person does not know how to do something, he or she may ask someone else for

³²Cited in Chris Lee, "Literacy Training: A Hidden Need," Training, September 1986, pp. 64-72.

information."³³ This often allows two people to complete tasks jointly that would be difficult for either person individually. Evidence of this is offered through tests administered to Navy personnel which found that two people working together performed at a reading level roughly three grade levels above the average of their individual reading scores.

The Navy's results show that neither grade level nor standardized tests are accurate indicators of workplace skills. Tests look at skills in isolation and under artificial conditions. Too often such tests underestimate a person's ability to perform in real world settings. Sticht cites studies of the predictive validity of the most widely used basic skills test, the Armed Forces Qualification Test (AFQT), which found that eight out of ten individuals whom military selection policies predicted would fail in job training and on the job actually performed satisfactorily.³⁴

The training literature gives additional support for redefining workplace literacy as more than a particular skill level. The American Society for Training and Development (ASTD) conducted a study to identify the skills employers desire in their workers.³⁵ These skills include:

- Knowing how to learn;
- Reading, writing and math;

³³Thomas G. Sticht, "Two Heads Are Better Than One" in BCEL Newsletter for the Business Community, No. 24, New York: BCEL July 1990.

³⁴Thomas G. Sticht, Testing and Assessment in Adult Basic Education and English as a Second Language Programs. San Diego, CA: Applied Behavioral and Cognitive Sciences, Inc., 1990.

³⁵Anthony P. Carnevale, Leila J. Gainer, and Ann S. Meltzer, Workplace Basics: The Skills Employers Want. For the U.S. Department of Labor, Washington, D.C.: The American Society for Training and Development, 1988.

- Listening and oral communication;
- Creative thinking and problem solving (the ability to recognize problems and seek out or implement solutions);
- Interpersonal, negotiation and teamwork skills; and
- Organizational effectiveness and leadership (knowing where the company is headed and how to contribute to moving it forward).

For the purposes of this study, we have adopted ASTD's skill areas as a framework for a working definition of workplace literacy, though we also note that it is not universally accepted: one critic asked, if leadership is "basic," what should be classified as advanced?

Several aspects of ASTD's definition of workplace literacy are worth noting. First, skill level is not identified as a component of the definition. This is because people at all levels of employment and education can benefit from improvement in some or all of the areas identified. Second, reading, writing and math comprise only one of the seven skill areas identified. Third, the definition focuses on developing a set of skills which serve as a foundation for assisting individuals in learning any number of job specific skills (which will change over time) and to interact effectively within the work environment. Finally, the competencies identified by ASTD suggest a set of skills related not only to the individual, but to the work environment as a whole. Workplace education does not begin or end at the classroom door. Instead, it aims at creating an environment which values and utilizes the multiplicity of skills that individuals possess.

Expert informants for this study also cautioned against viewing workplace literacy as the attainment of a specific skill level or a discrete set of job specific skills. Thus, we must define workplace literacy more broadly than being able to read at a 7th or 12th

grade level. Rather than focusing on a discrete set of job skills, experts have defined workplace literacy as skills which foster lifelong learning and help participants and employers to respond to an ever- changing work environment. A workplace literacy program may contain elements of job specific training or may provide a base enabling workers to participate more fully in job-specific training. However, the goals of workplace literacy are distinct from those of job training. The skills pursued are intellectual and their applicability is general. Job training may fall anywhere on the spectrum between general and specific, intellectual and physical.

Interview respondents have pointed out that, to develop true workplace literacy, an employer has to support broad based education, not just job-specific training. The study has found and examined programs that develop skills oriented toward career enhancement and which assist participants in adapting to a continuously changing workplace.

AN IMPORTANT LANGUAGE DISTINCTION

The term literacy is frequently used to connote performance at a limited skill level, rather than the more inclusive notion of mastering a broad range of skills. While the policy issues are currently being framed in terms of "literacy," many practitioners and companies prefer the broader designation "workplace education" for their programs. This perspective allows them to present programs to meet the needs of a broad range of workers, many of whom are literate but nonetheless need and appreciate education opportunities. Avoiding the term literacy also reduces the stigma attached by many workers to participating in a program viewed as being at a very low level. Workplace literacy must be seen as a positive building process rather than a remedial patching process. In support of the concept of workplace literacy as a positive growth-oriented process rather than a limited remediation effort, we have chosen to join many experts and providers in describing these programs as workplace education programs rather than

workplace literacy programs. This report will refer to the programs we studied as workplace education programs.

WORKPLACE EDUCATION EFFORTS: AN OVERVIEW

Businesses have involved themselves in workplace education in a number of ways. These include:

- (1) Offering tuition reimbursement as a benefit;
- (2) Providing presentations or materials describing the local education system and opportunities for adults to participate within that system;
- (3) Referring employees to local Adult Basic Education or literacy programs;
- (4) Providing space for an outside instructor to offer a class before or after employees' workday or during the lunch break;
- (5) Participating actively in designing and implementing an on-site program that teaches basic skills, coupled with incentives such as release time to employees wishing to participate in the program.

The programs with the greatest potential effects on the workplace are those with the most substantial employer involvement. This study found and studied several such programs; nearly all fit the description in (5) above. The programs varied in content. Some included a job-related curriculum based on a study of the jobs and used work-related materials -- machine repair manuals, measuring instruments, memos from the boss or the union -- which the employees might encounter on the job. Others relied on workbooks taken from general literacy or adult basic education classroom. Some consisted of standard English-as-a-Second-Language curriculum and materials; others,

much like the Vocational English as a Second Language courses that often accompany job training programs offered to non-native speakers of English, were tailored to include vocabulary needed to perform specific jobs for a specific employer. The programs also varied in instructional techniques. Some assembled a group of persons who nevertheless worked independently of each other on a self-paced basis, completing lessons in a workbook, with an instructor ready to give assistance as needed. Others relied more on group interaction. The programs varied in many other ways -- who planned them, who were the instructors, when they were held, how large they were, whether they were ongoing or had a scheduled beginning and end, who was allowed or required to participate, and how participation was rewarded, encouraged, or permitted. The defining features that these programs had in common were (1) the employer's involvement in making them happen and in making them accessible and convenient to workers -- they took place on the worksite, or the employer helped with transportation and coordinated scheduling -- and (2) they were offered to production workers or entry-level workers.

Teaching Methods, Decision Points, and Company Involvement

The majority of the programs we studied offered classes in English, ESL, math and GED preparation. Where basic literacy classes were offered, they generally were arranged through a local volunteer tutoring organization such as those administered by the public library. These individual tutoring sessions usually took place off-site while other types of classes generally were offered at the workplace itself.

Teaching methods included individual tutoring, a traditional classroom approach, self-paced workbook or computer based strategies, and what has been referred to as a learner-centered model in which participants, working in a small group with a teacher or facilitator (who may be a co-worker), are instrumental in identifying the content and direction of the class.

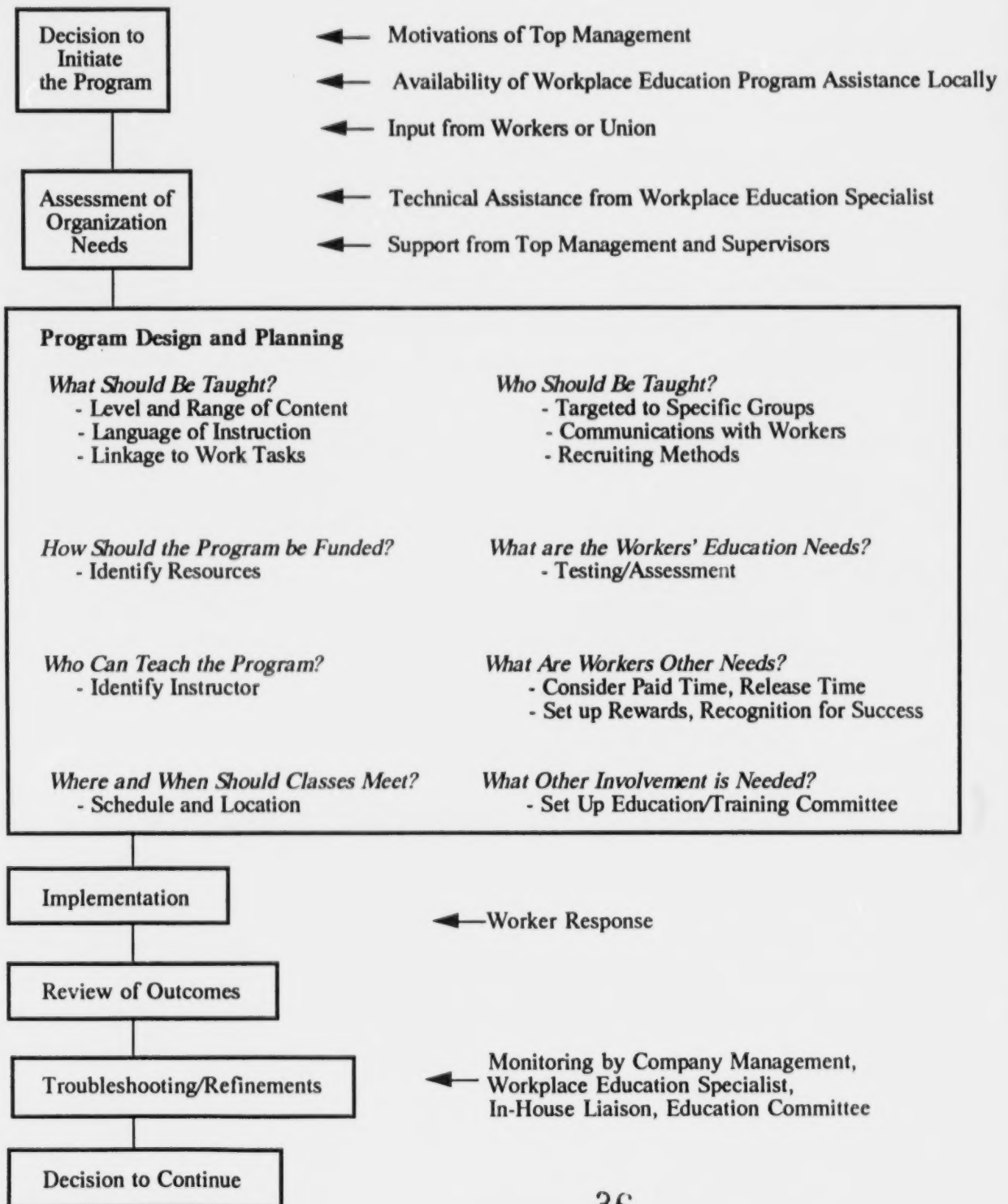
While many large firms have training and education directors on staff, such positions are uncommon in the staffing patterns of small businesses. Most programs in the small business community are developed with the assistance of outside technical expertise. Frequently, an outside service provider, whom we will refer to as the workplace education specialist, assists the interested firm with planning, developing, and implementing a workplace education program. Once an employer has decided to implement a program, several crucial decisions points will arise:

- Deciding who should be involved in the planning process.
- Diagnosing the needs of the workplace and the workers.
- Setting the program's goals.
- Deciding what classes would be most useful and how they should be designed.
- Finding and choosing an instructor.
- Working out program logistics: class size, timing, duration, location.
- Securing funds to support the program.
- Recruiting workers to participate in the program.
- Developing a program evaluation strategy.

Figure 1-1 depicts some of the steps in the process of setting up a program and shows a few of the key influences on that process.

Figure 1-1

Overview of the Steps in a Workplace Education Program



The degree of company involvement in the process varied substantially from firm to firm. Some of the firms we visited had quite limited involvement in designing the program, leaving most decisions to the discretion of outside workplace education specialists.³⁶ Others formed committees which included workers, supervisors, and human resource (or personnel) managers to work closely with a workplace education specialist. Typically the human resource managers were the primary points of contact assisting the workplace education specialist in identifying company needs, arranging for a meeting with other decision makers as necessary, and generally assisting the specialist in developing and implementing the program. The extent of the human resource managers' roles varied. In some cases they were the primary motivating force for designing and implementing the program, in others they served in a liaison capacity between the firm and the workplace education specialist.

Further details about the operation of workplace education programs are found in Chapter III below.

Workplace Education Programs: Why Companies Participate

In 1989, the American Management Association conducted a survey of employers, asking their reasons for becoming involved in workplace education. Most frequently, respondents cited the failure of the public school system; other pointed to a shortage of qualified job applicants and the changing nature of work in their companies. Employers "offered a variety of reasons for remedying the situation: safety, quality, productivity,

³⁶We have used the term "workplace education specialist" or sometimes "work force specialist" to designate an outside service professional who serves as an important catalyst in the development of workplace education programs. We have borrowed the terminology from some of the state-level demonstration programs we encountered, but used it generically to refer to the person that performs that crucial set of functions -- from convincing the company to undertake a program, to acting as a consultant throughout the planning and start-up phases, helping recruit and test participants, arranging for an instructor, and following the progress of the program at least during the early stages of full operation. Typically, this person is on the staff of a service organization or education agency which has funding to support these consultation efforts.

promotability, and personal development. Altruism, when it was mentioned at all, was tempered with a strong sense of utility. '...to improve the employees' quality of life, which in turn will enhance job performance' explained one respondent."³⁷

Another survey, conducted in late 1989 by the American Society for Training and Development found that nearly 75% of Fortune 500 companies were providing basic skills training to employees and another 20% were planning to provide such training. The companies cited several major reasons for their decisions:

- Entry-level employees have low education and skill levels (48%);
- They want to upgrade the skills of their current employees (68%);
- The need has been prompted by a change in the work process (58%);
- Changes in technology have created the need for training (56%);

Finally, according to one source, a growing segment of U.S. manufacturers have taken on the challenge of changing the way their work is organized, based on a conviction that they must do so in order to survive and prosper. They are using Advanced Manufacturing Technology (AMT), a combination of computer-assisted techniques and planning processes which experts have cited as crucial to international competitiveness. They have also found that AMT requires changes in the way they organize and manage their workers at all levels in the organization. Specifically, companies implementing AMT have been characterized by:

³⁷Described in Chris Lee, "The Three Rs," Training, October 1989, pp. 67-72.

- Greater interdependence among work activities;
- More immediate and more costly consequences of malfunction;
- Flexibility, problem-solving, interaction, and a high level of commitment in the work force;
- Smaller numbers of workers, more highly skilled and trained, with more individual responsibility, and a flatter organizational structure; and
- A strong partnership between management and workers (and/or unions).

A growing body of literature supports the findings of the present BPA study, namely that employers' interests and objectives in implementing workplace education programs are distinct from those motivating job specific training and are much broader than simply improving reading, writing, and computation skills related to a specific job. As discussed in the ASTD report Workplace Basics, employers are interested in a broad range of skills including interpersonal skills, and the ability to learn. These skills are not developed through compartmentalized or isolated skill development, but rather by creating an environment in which learning, the exchange of ideas and their application are valued and supported.

These interests and motivations of employees and employers mesh with the current vision put forth by America's Choice: High Skills or Low Wages.³⁸ To create a healthy economy and equitable society the U.S. must move towards creating high skilled jobs in high value added industries. As noted business theorist Peter Drucker points out in The New Realities,

³⁸Commission on the Skills of the American Workforce, America's Choice: High Skills or Low Wages!, Rochester, NY: National Center on Education and the Economy, June 1990.

The post-business, knowledge society is a society of continuing learning and second careers...The failure of the American school to deliver universal literacy is America's real 'Rust Belt.'...Delivering literacy -- even on the high level appropriate to a knowledge society -- will be an easier task than giving students the capacity and the knowledge to keep on learning, and the desire to do it...Education can no longer be confined to the schools. Every employing institution has to become a teacher.³⁹

SCOPE OF THE STUDY

The purpose of our study was to explore and describe workplace literacy efforts in small business -- those efforts currently taking place within small business to increase the basic skills of employees. While many such efforts have been described in large companies, very little documentation existed about small businesses participation in workplace education programs. In order to learn more about those instances in which small businesses had developed programs with some success, we planned to visit several companies, study their programs, and interview participants and managers.

In planning for an open-ended exploratory study, a necessary first step was to decide what the boundaries of the study were to be -- in other words, what did and did not fall within the scope of the inquiry. Decisions about boundaries, in turn, required clear and specific definitions of key terms. The definitions which shaped the "ground rules" for this study are discussed below.

Definition of Small Business

For the purposes of this study, we defined a small business as one with fewer than 500 employees, the size standard most frequently used for research purposes by the U.S. Small Business Administration. We encountered some difficulty in adhering to the 500-employee size standard in selecting companies for site visits. In all cases, our first information about those companies came from discussions with outside observers such

³⁹Peter F. Drucker, The New Realities: In Government and Politics/In Economics and Business/In Society and World View, New York:Harper & Row, 1989.

as state liaisons and service providers. Those persons often relied on their own impressions of "smallness" as they discussed site visit candidates with us. On several occasions, as we were beginning to make site visit plans and conducting the second round of interviews which included a company representative, that person informed us that the company was not, strictly speaking, small. Either the total number of employees was slightly in excess of 500 ("not-quite-smalls"), or the company was actually small locally but owned by a larger corporate entity ("pseudo-smalls"). Given the study's need to arrange site visits in geographic clusters for the sake of efficiency, we decided that pseudo-smalls could be included in the study if they met specific conditions:

- (1) Decision making on human resources issues did not involve input or guidance from the larger corporate entity;
- (2) The local company received no financial support or encouragement from the corporate office for the workplace education program; and
- (3) The practices observed, and lessons learned, in those companies appeared to be transferable to a true small business.

Though the definition of "small" caused some difficulty in the site selection process, no parallel problems arose regarding "business" -- i.e., the preference for studying businesses rather than other types of small employers such as public or not-for-profit entities.

Definition of "Workplace Education Program"

As discussed above, employers have become involved in many different ways and at any of several levels in sponsoring or encouraging worker education efforts. Therefore, we needed to develop some guidelines to determine which programs should be deemed worthwhile to study in detail. For a project to be considered as a case study site, several additional elements had to be present. For instance:

- Active involvement on the part of management -- going beyond minimal efforts such as referring workers to an outside resource or encouraging enrollment in courses offered independently of the employer's involvement;
- Targeting (or at least inclusion) of production or entry-level workers rather than professionals or managers;
- Substantial link to the workplace -- classes held on-site, company providing materials, meeting space, paid/release time, and other types of support.

The individual projects we studied varied in scope. The most common were self-contained course offerings arranged by or for a single employer for the workers at that workplace. Two of the projects were also open to employees' family members, and one offered to include members of the local community. Another project was actually a joint offering of two employers, with workers from each company going to the other's premises to participate in the classes.

ORGANIZATION OF THIS REPORT

Chapter II briefly recounts the methods used to gather information in this study and describes the sample of companies and programs visited. Chapter III describes the detailed findings of our on-site case studies. Chapter IV presents some of the techniques that case study firms found successful in operating their programs. Chapter V draws some lessons from our findings about the roles that companies, educators, and government can play in enhancing small business employees' basic skills. Chapter VI summarizes our observations and concludes with some specific policy recommendations.

II. STUDY METHODS

SOURCES OF INFORMATION

The three major sources of information for this study were (1) unstructured telephone interviews with expert respondents identified nationwide, (2) information contributed by state-level resource persons or literacy liaisons, and (3) site visits to 18 operating projects in seven states and one Canadian province. In the first phase of the project, we relied upon the following initial sources:

- All known reports and other written materials on the subject of workplace literacy, including the results of topic searches in periodicals (such as the Employment and Training Reporter) and a bibliographic database;
- Newsletters and other materials supplied by sources such as the American Society on Training and Development and the Business Council on Effective Literacy;
- Articles and other materials assembled for a related course being offered at the University of California;
- Sources cited and individuals referenced in those materials;
- A list of participants in an SBA conference on workplace literacy; and
- Individual word-of-mouth referrals to experts.

Very few of these sources could contribute specific expertise on the subject of small business implementation of workplace literacy programs, though many had an

understanding of the special problems that logically might confront a small employer. Thus the initial focus of the study was to gather information on workplace literacy in general, and then to begin asking the questions that uniquely characterized this study, such as: "what are the effects of company size on the employers willingness and ability to put together a program?" or "what difference would it have made if the company were small?".

As we began to gather an extensive list of potential contact persons, we also designed interview guides to serve as a planning and training tool, to make sure that the members of the study team were agreed on the issues that should be covered in each type of interview. At that point we began to conduct the three different types of information gathering listed above. A brief description of each of these three processes follows.

Expert Interviews

The initial literature sources described above served two major purposes: to provide general background information, and to suggest names of knowledgeable individuals to consult in the expert interviews. We completed approximately 75 such interviews, some with respondents who were associated with specific sites that we later visited. The interviews varied a great deal in duration and intensity, depending on the level of the respondent's interest in and knowledge of issues related to small business.

The list was the result of a "snowballing" process in which respondents were asked to suggest additional experts. In an exploratory project such as this, with limited schedule and staff time, new leads emerged but occurred too late in the study process to be effectively incorporated. Thus, the list of experts interviewed was by no means inclusive -- not every relevant expert was included in the interview process and many may not even have been identified.

We asked telephone interview respondents several types of questions: operating definitions of workplace literacy; the nature of their own involvement or activities, and whether any of those related to small business; their perceptions about the key factors in the success of workplace education programs; the (known or inferred) effects of employer size on programs' success and on the likelihood of being able to begin a program; what information they had about hypothesized ways for small businesses to pool resources (such as local or industry-based consortia); what ideas they could offer regarding additional persons we should be contacting; and what leads they could give us to specific projects involving small business.

State-Level Resources

In addition to conducting expert interviews, we circulated a project description and a request for information to a list of state adult literacy contacts. The responses to this mailing indicated widespread interest in the study. They also provided or confirmed leads that resulted in several of the site visits, though it was not possible to pursue all of the information offered. The responses to this mailing usually took the form of a telephone call or a letter with informational enclosures. When possible, we followed up written responses with a telephone discussion, particularly those that seemed likely to lead to case study candidates.

Site Visits

Finally, we selected eighteen projects for detailed study and arranged for site visits to conduct a full set of interviews. Our goal in selecting the site visit sample was to find a diverse group of businesses and programs, in terms of industry, size, type of program, relationship with educators and other service professionals, and age of program. The characteristics of the projects and companies studied in depth are presented in the next section of this chapter, Characteristics of Case Study Sites. For each project studied, we interviewed the following types of respondents:

- An outside coordinator or specialist who had assisted in planning and starting the program, and who often had introduced the idea to the employer (we have generally referred to these persons as workplace education specialists, the term used in some of the sites);
- An instructor conducting classes on the worksite. Some of these were employees of the state or local district Adult Education system; some were teachers from the traditional K-12 structure, working on an "after hours" basis; some were retired or part-time teachers; and some were adult literacy specialists or specially-trained facilitators;
- One or more persons in various management positions within the company who were instrumental in making the program happen or who were key to its success. These may include the CEO, the chief operating officer, a personnel manager, or a department head;
- If applicable, a representative of organized labor. This could be a shop steward or other representative employed by the company, or an official based elsewhere in the community who had played an important role in organizing, coordinating, or supporting the program; and
- One or more workers participating in the program. These workers included assembly workers, nurses' aides, a construction foreman, metal workers, chemicals mixers, clerical workers, and food service workers.

In many of the site visits, we were also able to time our visit so that we could observe a class in progress. We have included site-specific profiles in Appendix A for those companies which agreed to make the information public. The characteristics of the companies and projects visited are summarized in the next section; more general findings are discussed in Chapter III below.

CHARACTERISTICS OF CASE STUDY SITES

The eighteen case study sites varied in both company characteristics and the nature of the program itself. Those characteristics are presented in Table 2-1.

The "typical" site is a manufacturing plant on the outskirts of a medium-sized town, with about 250 production workers. Managers had been approached by an outside professional (the specialist) who was selling the advantages to workers and the company of setting up a workplace education program, and had agreed that it was a good idea, even though they had little or no evidence of knowledge deficiencies among their workers. The specialist conducted a series of discussion with a human resource manager, workers, supervisors, and top management in order to set goals for the program and include everyone in the design process. Then classes were scheduled and information given to workers about the classes. The company posted notices and included notes with paychecks; the notices invited workers to attend information sessions to explain the program. The specialist or the instructor tested all those who expressed interest, in order to determine the appropriate level of materials to use, and classes began.

The class is an ongoing, open-entry-open-exit format; it meets twice a week for two hours at the beginning or end of the main shift. Workers are partially paid for the time they spend in class. Learners work individually with books and workbooks, all proceeding at their own individual pace. The instructor works with the students, asking questions about the materials they are studying, answers any questions they have, and provides encouragement. Some of the class time is spent in group activities or discussion. Learners may be asked to write a few sentences in a journal or solve a problem related to the type of work they do. A few of the learners have taken a General Educational Development (GED or high school graduation equivalent) test and passed; others have mastered skills and gained self-confidence that has helped them on the job;

Table 2-1

Characteristics of Case Study Sites

<u>Company (Establishment) Size (Number of Employees):</u>	
1 - 100:	3
101 - 250:	9
250 - 500:	6 ¹
<u>Single-Establishment or Multiple-Site Company:</u>	
Operates Out of a Single Site:	10
Operates Out of Two or More Locations:	8
<u>Company Location:</u>	
Urban:	2
Suburban:	8
Rural or Small Town:	8
<u>Industry:</u>	
Manufacturing -- Consumer Products:	6
Manufacturing -- Intermediate Products:	4
Manufacturing -- Other Products:	2
Construction:	1
Health Services:	4
Transportation:	1
<u>Years Operating Workplace Education Program:</u>	
One Year or Less:	14
One to Two Years:	1
More than Two Years:	3
<u>Type of Outside Service Provider Used in Consulting or Planning Capacity:²</u>	
Adult Education System Employees:	1
Community or Junior College Staff:	6
Other Education System Employees:	2
Other Government Agency Employees:	5
Non-Profit Organization Staff:	4
Other:	1

¹One site turned out to have more than 500 employees, contrary to the information initially provided.

²Several companies used more than one type of service provider.

Table 2-1 (continued)

Type of Outside Service Provider Used as Instructors:³

Adult Education System Employees:	1
Community or Junior College Staff:	6
Other Education System Employees:	2
Other Government Agency Employees:	5
Non-Profit Organization Staff:	4
Other:	1

Number of Workers Participating (Per Year):

1 - 25:	11
26 - 50:	5
More than 50:	2

Occupations Targeted or Included:⁴

Assemblers:	7
Machine Operators:	10
Other Production Workers:	3
Food Service Workers:	4
Health Service Workers:	4
Other Service Workers:	4
Other Occupations:	3

Topics Emphasized in Program:⁵

English and Math (Elementary Level):	12
English and Math (GED Preparation):	15
English as a Second Language (ESL):	6
Workplace Communications, Problem Solving, Critical Thinking, etc.:	3
Job-Specific Training or Materials:	1
Other:	1

Job-Related Content of Educational Materials:

Yes:	1
No:	12
Mixed:	5

Number of Programs with Strong Union Involvement: 5

³Many companies used more than one type of service provider.

⁴Total exceeds 18 because companies targeted more than one occupation.

⁵Total exceeds 18 because many companies included multiple topics.

many report positive effects in their interactions with family members and others in the community.

It is worth noting that no single site exactly fits the above description. It is presented to provide a context for understanding the variation in characteristics presented below, and for interpreting the detailed case study findings described in Chapter III.

III. SUMMARY OF STUDY FINDINGS

The findings from telephone interviews and case studies of 18 programs are presented in this chapter. They include discussions of employers' motivations in establishing workplace education programs, factors affecting program start-up, workers' motivation to participate, key structural components of successful programs, needs assessment strategies, program logistics, cost and funding sources, the range of curriculum content, varying instructional approaches, other services offered, measures of success, and alternative organizational models for workplace education programs.

Before beginning that discussion however, it is worth pointing out that companies conducting workplace education programs represent a small minority of all companies, and an even smaller minority of small companies. A nationwide survey of companies (all sizes; no separate calculations were available for small companies) found that slightly over 30% of respondents reported programs to train existing workers rather than recruit new ones.¹ The following percentages of the respondent group report specific training strategies:

- Bonus for completing a degree (7%)
- Training prior to employment (8%)
- Job redesign to fit employee skills (11%)
- Remedial education (17%)

¹"Workforce 2000: Competing in a Seller's Market: Is Corporate America Prepared? A Survey Report on Corporate Responses to Demographic and Labor Force Trends." A Report from Towers Perrin and the Hudson Institute, 1990.

- Scholarship program (20%)
- Partnership with high schools or technical schools (32%)
- Courses delivered on the worksite (40%)
- Tuition reimbursement program (77%)

Counting only the subset of companies that reported a strong overall management commitment to training, the percentages in each of the groups above were raised by about 10% on average. In particular, a larger proportion (63%) of companies with strong management involvement reported offering on-site courses to employees.

EMPLOYER MOTIVATION

Our review of the literature and interviews with expert sources, service providers, and employers indicated three primary factors motivating employers' decisions to establish workplace education programs:

- Technological change -- jobs have changed and are projected to change, because of recent or pending introduction of new equipment or production processes;
- Employers feel a need to upgrade their workers' skills because of competition in both the labor market (e.g., they cannot hire people with the skills they need and must train them) and the product market (e.g., they need to reduce error rates to satisfy customers); and
- Employers are convinced that it is important to provide employees with an opportunity to improve their skills and further their educational goals.

Response to Technological Change

While only a few of the employers we visited reported that they had actually implemented new technologies -- or that such changes had led them to start workplace education programs -- several did mention being motivated by a desire to prepare for changes they anticipated in coming years. For instance, several manufacturers reported foreseeing changes in job demands as statistical process control (SPC) systems are introduced. Other employers reported realizing, after they had invested in new equipment, that upgrading equipment alone would be unlikely to effect all the needed changes in their production process. It seemed sensible, they reported, to turn their attention at that point to "upgrading" the other main factor of production, namely the workers.

Response to Competitive Pressures

Closely linked to the trend toward new technology is the competitive pressure American companies are facing. One major impetus for the changes in the traditional production processes is the economic pressure from imports. Some of the employers we visited were in the process of adopting or considering changes in management which allow blue collar workers greater control of the production process -- changes which require that those workers be well trained and flexible to assume those responsibilities. As more control over the work process moves to blue collar workers, the need for training and education programs becomes more apparent. While only one of the firms visited had actually made significant organizational change (self-managing work teams), the diffusion of new management concepts that emphasize employee development was evident in virtually all companies visited.

In Workplace Basics: The Skills Employers Want, Carnevale et al., point out that the production process in the United States has traditionally depended on what they call

"technical elites".² They go on to explain that the U.S. has always invested heavily in both the formal education and workplace learning of this group. Control of the production process has rested in the hands of senior level technical personnel and other white collar staff. Thus our traditional structure is a managerial hierarchy with many layers of authority. Other nations have developed systems with fewer layers of managers, relying more on the formal education and training of craft and skilled blue collar employees. Traditionally, the United States has competed successfully in the early stages of product development, when highly-trained technical experts create a comparative advantage. However, our traditional structure has left us at a disadvantage in later stages of production, when efficiency in production and incremental increase in quality -- a product of well-trained and flexible blue-collar workers -- are important.

Sondra Stein, Director of Massachusetts' Commonwealth Literacy Campaign, echoed this argument in describing the Massachusetts experience with workplace education. "Our program could succeed," she said, "because it is congruent with the kinds of changes in management and in the organization of production many of our companies were already initiating in response to... economic changes. ...Most of the companies that are consciously adopting workplace education programs do so because they see them as a tool for creating the more broadly educated workforce needed to successfully institute some of these changes in how goods are produced or services delivered -- including quality circles and other team processes that give workers more direct control over the quality of the product and the conditions under which they work."³

²Carnevale, Anthony P., Leila J. Gainer, and Ann S. Meltzer, Workplace Basics: The Skills Employers Want, The American Society for Training and Development and the U.S. Department of Labor, Alexandria, VA, 1988.

³Stein, Sondra G., "Workplace Literacy and the Transformation of the American Workplace: A Model for Effective Practice," Paper Prepared for Statewide Conference, Massachusetts' Commonwealth Literacy Campaign, Boston, MA, 1990.

Five years ago, the National Academy Press published a book predicting that a growing segment of U.S. manufacturers would be taking on the challenge of changing the way their work is organized, based on a conviction that they must do so in order to survive and prosper.⁴ The key to the change is Advanced Manufacturing Technology (AMT), a combination of computer-assisted techniques and planning processes which experts have cited as crucial to international competitiveness. AMT requires changes in the way companies organize and manage their workers at all levels in the organization. Specifically, companies implementing AMT have been characterized by:

- greater interdependence among work activities;
- more immediate and more costly consequences of malfunction;
- flexibility, problem-solving, interaction, and a high level of commitment in the work force;
- smaller numbers of workers, more highly skilled and trained, with more individual responsibility, and a flatter organizational structure; and
- a strong partnership between management and workers (and/or unions).

This view coincides with many of the observations of our case study respondents.

A Strategy for Employee Development

The majority of employers in our study reported that they implemented programs in order to provide workers with the opportunity to improve skills and further educational

⁴Human Resources Practices for Implementing Advanced Manufacturing Technology, National Academy Press, Washington, D.C. 1986.

goals. These employers clearly recognized that supporting workers in this way provides benefits to the employer. As one employer commented, "What [the program] does for the people all comes back to the company. You can never measure it, but you'll see it in quality, morale, and ethics." Actual benefits to the firm included increases in employees willingness to take on new tasks, greater self-esteem, a stronger sense of engagement in the workplace, and more frequent use of suggestion boxes. The company also hoped to improve its ability to attract and retain employees, promote from within, and maintain a positive tone in the workplace. If employers were motivated by an expectation that workplace education would improve productivity, few of them discussed that factor in interviews. When improved productivity was mentioned as an outcome of the programs visited, it generally was linked to increased self-confidence and improved morale.

Preventing Turnover or Increasing the Risk?

The media, the professional literature, and experts in the field have warned that workers who provide workplace education risk losing their investment. For instance:

Investing in [human] capital has seemed very risky to managers. Employees can take their generic training -- in literacy, conflict resolution or statistical process controls -- to competitors, who then get a "free ride" on the training the first employer provided. ... Employers pay for job-specific, or machine-specific, training, but resent paying for generic education -- precisely the kind a flexible, problem-solving work force requires. To escape this trap we need to develop alternative mechanisms and managerial cultures that de-emphasize radical individualism, and that instead emphasize cooperation and strategic investments in human capital -- just as other highly industrialized countries have done.⁵

⁵"Drake, Rodman, "Management 2000: 'Death of the Gunslinger.'" Address at a 1990 conference sponsored by Towers Perrin and the Georgetown University Graduate School of Business, reproduced in Cresap Word-for-Word, 1990.

Despite warnings such as these, managers in case study companies denied being influenced by considerations of worker retention when they were considering starting a workplace education program. And they could see no evidence that they were losing their newly-educated workers.

Two employers in our study recognized the danger that limited opportunities for upward mobility within the firm could cause program participants to use their improved skills eventually to seek employment outside of the firm. Nonetheless, they thought that the program strongly benefitted the company since workers felt more positive about the workplace and engaged more actively in their day-to-day work and other company activities. While several managers expected to see concrete results (e.g., reduced absenteeism, greater loyalty and therefore retention) from their workplace education programs, others focused on less tangible benefits such as a better ambiance within the workplace.

Is the Program a Response to Inadequate Worker Skills?

While some of the literature in the field and related media reports point to inadequacies in workers' skills as a reason for undertaking workplace education,⁶ we found remarkably little evidence that this was a motivating factor. In only one instance did a business owner begin a program because he had discovered a highly-regarded employee who was making errors because he could not read.

⁶See for example Arnold Packer and William Johnston, Workforce 2000: Work and Workers for the 21st Century, Hudson Institute Report to the U.S. Department of Labor, Indianapolis, IN, 1987. Another example is Building a Quality Workforce, A Joint Initiative of the U.S. Department of Labor, the U.S. Department of Education, and the U.S. Department of Commerce, Washington, D.C., 1988, which states that skills deficiencies are costing American business monetarily, through waste, lost productivity, reduced product quality, and ultimately a loss in competitiveness. They cite examples from an April 27, 1988 article in the New York Times. Because some employees have trouble measuring, a company's level of wasted material is higher than it should be. Workers have trouble reading blueprints, forcing the plant to redo orders and pay overtime.

External Motivation: The Workplace Education Specialist

In fact, most of the companies visited did not begin their programs because of a strong internal motivation, but rather because someone made it easy for them to do so. Typically a workplace education specialist approached them and offered a no-cost and "no-hassle" program that sounded like a good idea. Many of the arguments used in selling the program to the employer were echoes of news he or she had read in newspapers or trade publications about competitiveness or worker scarcity, or had heard at conferences. And finally, what was being offered was congruent with the employer's image of the company as a "good employer" who cared about the workers enough to invest in their future.

PROGRAM START-UP

The previous section discussed the before-the-fact expectations that employers had or may have had that affected their willingness to start a workplace education program. This section, by contrast discusses the experience of case study firms with program start-up: the barriers they encountered, the resources they found available to help, and the actions they took to make start-up more successful.

Barriers Employers Encountered

The most interesting barrier to start-up proved to be the employers' fear that workers would not be interested in workplace education. Employers were delighted to discover not only that interest was high, but that individuals were much more willing to step forward publicly to express interest than had been anticipated. Other barriers, discussed in more detail below, included lack of knowledge about workplace education programs and the need for money and expertise to assist businesses in starting education programs.

Many employers were completely unfamiliar with workplace education programs until they were approached by a workforce specialist who set out to convince them that they should initiate one in their company. Once they had learned about the benefits of workplace education programs and that assistance was available to implement programs, they came to believe that it could be a valuable effort to pursue. Virtually all employers, including those who had been somewhat skeptical initially, reported the success of their program and associated benefits exceeded expectations. As one employer said, "We've gotten more mileage out of this program than anything we've done in the last eight years."

Designing a workplace education program is a labor intensive process. This is particularly true for individuals who have little or no experience in the field. A lack of in-house expertise related to workplace education creates a particular hurdle for small businesses, which generally have limited time and resources for administration and other efforts not directly connected to the production process. Small businesses rarely have training directors, and may not have full-time human resource or personnel managers. Where personnel managers do exist, they are often responsible for a wide range of tasks. Under such circumstances, the potential to develop the expertise independently to support a workplace education program is limited. Technical assistance in developing and implementing workplace education programs within the small business community is therefore a vital need.

While a number of employers reported having interest in establishing a workplace education program prior to contact with a workplace education specialist, only a few began on their own to explore how to implement a program. Of those, one was a former teacher. Almost all of the firms visited indicated they would not have been likely to implement programs without the technical and financial start-up assistance that was made available to them.

Use of Technical and Financial Assistance

Case study companies typically took advantage of the easily available technical assistance on workplace education. Workplace education specialists proved helpful in clarifying what decisions needed to be made, what the available options were, and what other companies had found to be helpful. They were able to discuss the potential implications of specific alternative choices, such as the way employees might perceive the program if classes were held in a separate space or in the lunchroom. They provided assistance in identifying organizational issues related to program goals, for instance understanding what managers expect from the program and how to communicate program goals to employees. They were able to diagnose in advance what might turn out to be problems, such as the conflicting demands of parents with young children if classes are offered at 5:30 p.m. They often had learned from prior experience what could be the key components of a successful program. Additionally, those companies that relied on outside help to present the program to employees and assess their needs found that the workers were relaxed and candid in discussing their educational needs with an outsider whom they saw as a neutral party and not a threat to their job security. Specific areas in which technical assistance proved useful included:

- Understanding the needs of adult learners and recommending sound instructional approaches;
- Discussing the program with workers and assessing their educational needs;
- Deciding on the program and/or course content that will meet these needs;
- Making recommendations about course schedule, location, and other logistical details;

- Identifying a suitable instructor; and
- Marketing the program to employees.

Costs of Start-Up

Another perceived or actual barrier to program start-up is cost. While the ongoing instructional cost associated with running a program is relatively low, initial program development is time consuming and can be expensive. The programs we visited generally were able to take advantage of the services of publicly-funded or subsidized organizations which provided technical assistance on setting up workplace education programs at no cost or very low cost to the employer. Many of these organizations also helped by paying for, or helping the company obtain grants to subsidize, the instructional costs of workplace education programs. A more detailed discussion of funding sources is found in the section below on cost and funding.

The interviews with experts and with case study respondents indicate that the availability of public subsidies that programs urgently needed in the first year of operation -- in amounts sufficient to cover all planning and instructional costs -- were an important factor in increasing the number of firms offering workplace education programs. This was particularly true for small firms. Most case study employers reported that they would not have been likely to implement programs without the availability of public funds for start-up. However, because of the positive influence of workplace education programs on the firm, roughly half of the employers indicated that they would be willing to pay 100% of instructional costs in order to continue their programs.

Because most of the companies contacted in conjunction with this study had received free technical assistance and start-up help from a publicly subsidized program, they seemed to have little awareness of the costs that would have otherwise been

associated with planning and setting up a workplace education program. Those costs can be substantial -- perhaps ranging from \$3,000 to \$30,000 depending on the size and complexity of the site and the program. Costs include the time and expertise needed to conduct a needs assessment, recruit participants, develop a curriculum, and find a suitable instructor. Companies generally did seem to be aware of the ongoing costs of instruction: the instructor's time, books and other materials, classroom space, testing fees, and (potentially) the time of participants. This awareness could result from the fact that they had to plan to assume these costs, either right away after starting or at some point in the future. Even those that did not pay or foresee paying learned about instructional costs from technical assistance providers. By contrast, the cost of the technical assistance services themselves usually remained hidden, and were difficult even for the technical assistance provider to quantify. While technical assistance providers often had to purchase instructional time and worry about other ongoing costs, their own time and assistance itself was absorbed as part of a larger project (such as a state- or federally-funded demonstration) and therefore not explicitly calculated.

Technical assistance in starting a workplace education program can be found through private consultants, non-profit consultants, community based organizations, local school districts, and community colleges. A few sources of assistance are listed in Appendix C. Many of these organizations receive public funding and make their services available at no or low cost.

ALTERNATIVE APPROACHES TO NEEDS ASSESSMENT: PROS AND CONS

A needs assessment is an important component of establishing a successful program. It can be used for any of a variety of tasks including:

- Identifying the skills and information that workers must have to perform effectively on the job;

- Looking for areas in which employees could benefit from additional training and education;
- Understanding communication patterns within the firm; and
- Diagnosing the levels of education and interests among employees.

Identifying the varying needs of the workers, the job, and the company occurred in a variety of ways in the programs observed for this study. These ways included informal needs assessments, mandatory worker needs assessment, literacy task analysis, and organizational needs assessment.

Informal Process

Within the companies visited, the most common approach to assessing the educational needs of the workplace began when the company's managers identified general educational areas to address (e.g., ESL, English and/or math). The next step was usually general outreach to employees. Interested employees were invited to participate in short interviews regarding their needs, interests and goals, and/or to take an assessment test.

The information from interviews and tests was used to (1) target classes towards those with the greatest need, (2) design a class to meet the needs of the largest number of interested employees, or (3) to route each participant to the most appropriate class level in instances where a choice of levels existed.⁷

⁷These groupings tended to be fairly general. Educators report that, within any group educational effort, individuals within a given class can be expected to vary in skill level and differ in strength across skill areas. Most instructors take this diversity as a given. Many instructors are able to use differing skill levels to their advantage, for instance by encouraging students to form complementary teams to take on projects. Such techniques are easiest in small classes.

Companies and education specialists reported that quite frequently, those workers with the highest levels of formal education were the first to come forward and express interest in a workplace education program. Those are the workers, they say, for whom prior education experiences have been the most positive. For others, the prospect of participating in a class awakens old feelings of inadequacy. Managers therefore point to the importance of finding non-threatening ways to discuss needs with all employees prior to beginning each new offering.

Another important factor appears to be the company's willingness to give employees sufficient time to "warm up" to the idea of workplace education. Over time, as the program becomes known as an opportunity for success rather than failure, workers with little formal education will often become more comfortable acknowledging their needs. A program which focused on the educational needs of all levels of employees found workers with less than high school education came forward only after the program had been in operation for three years. Study respondents were able to suggest a number of ways to encourage the participation of employees with little formal education, such as private one-on-one discussions of the program, notices sent home in paychecks, and colorful illustrated posters stressing that the program is for everyone. At the same time they emphasized the importance of reaching out on a continual basis to all employees, especially those with relatively low levels of formal education.

Mandatory Assessments of Workers' Skill Levels

Some programs observed for this study utilized start-up strategies that appeared to have negative effects on worker participation. For example, in a few cases, all employees or employees within specific job categories were required to take a standardized test to assess reading, writing and/or math skills. This practice created a high level of anxiety among employees. In one case, the anxiety level was so high and test results so poor that scores were deemed useless in facilitating program development and thrown out. Additionally, respondents reported that they later deemed the test detrimental to the program's acceptance and therefore its success, as it created a feeling

of failure among employees. One instance of limited mandatory testing appeared not to have aroused negative feelings among workers. The reasons reportedly included successful communications about the reasons for the testing: to help the teacher design a course which would help an identified small group of workers manage and adapt to a new company innovation.

Literacy Task Analysis

Another approach used by programs participating in the study was the literacy task analysis (LTA), which is designed to determine the reading, writing and math skills required to perform a particular job successfully. Though programs used many methods in conducting LTAs, the most common methods involve observation of groups of workers carrying out their tasks, coupled with interviews of employees and their supervisors.

While such efforts can provide useful information for management, they rarely uncover a job-related need for increased math or English skills. The professionals interviewed reported that, unless a company has recently installed a new production process or procedure, they have most commonly found the majority of employees functioning at a very high level relative to reading, writing and math skills required by their jobs. Thus the LTAs conducted by programs contacted did not usually point to a need for a basic skills programs, but rather led to the company addressing other, more specific needs within the workplace.⁸

⁸This finding does not mean that programs to improve English and math skills would not be beneficial to the workers in those jobs. Such programs provide a multitude of benefits other than increasing reading, writing and math skills necessary for a current job. Examples are increased employee self-confidence and flexibility to take on new tasks, increased opportunity for internal promotion, improved ability to attract and retain employees, preparation for more technical training, positive attitudes among workers toward the employer, and increased attachment to the work and the workplace. This finding is consistent, rather, with the observation that most workers, given time, find ways to meet the demands of a current job.

Small businesses, because of their size, usually establish programs for all employees or for all hourly employees. This practice offers several advantages in that individuals and/or departments do not feel singled out as being "in need of remedial education." It may, however, make LTAs more difficult to conduct and less efficient due to the relatively small number of people performing any given job.

LTAs are often very time consuming and expensive. They are often narrowly focused and perceived as a threat by employees, thus diminishing or making more difficult the future success of the program. Many respondents felt that it was more appropriate to look at literacy needs within the larger context of understanding the full set of communications -- how, by whom, to whom, how often, for what purposes -- that normally take place within the organization as a whole. This approach is often referred to as an organizational needs assessment.

Organizational Needs Assessment

The organizational needs assessment (ONA) consists of an examination of communication needs and patterns, along with other uses of language and computation, throughout the workplace. Typically an ONA will include interviews with approximately 10% of the workforce representing a cross section of employees including managers, supervisors, and entry level workers. Respondents are asked to describe their experience with company orientation programs, how the firm's procedures for being considered for a promotion, how they learn of new company policies or programs, what they do on their jobs, and the extent and nature of the reading, writing, and math demands associated with their jobs.

This approach is widely used by workplace education specialists in Ontario, Canada. It is less common within U.S. companies, though elements of the approach are found in typical informal needs assessment practices. Ontario's approach to needs assessment grew out of their English in the Workplace program for immigrant workers

and the discovery that the program's effectiveness depended on looking at the whole organization rather than the individual. This approach has now been incorporated into workplace education programs throughout Ontario. One service provider there pointed out several advantages:

- (1) *Assists the trainer in mapping the workplace and understanding the culture of the organization.*
- (2) *Identifies crucial issues which will determine the success of any workplace literacy program.*
- (3) *Identifies other issues within the organization which need to be addressed along with the workplace education program. For example, company materials may need to be written in plain English, organizational channels of communication may need to be improved, or multicultural issues may need to be dealt with.⁹*

OPERATING COSTS AND FUNDING SOURCES

The majority of the companies visited reported low out-of-pocket operating costs, meaning costs that would have to be separately budgeted.¹⁰ The lowest-cost was in a manufacturing company, which reported an ongoing operating cost of a \$20 per hour fee for the instructor. (This amounted to a cost of \$2.00 per contact hour on average, since about ten students normally attended the class.) The instructor was a regular teacher in the public education system, retained by the program for afternoon classes as an

⁹"Diagnosing Literacy Needs in the Workplace." Frontier College, Toronto, Ontario, 1989.

¹⁰In other words, out-of-pocket costs would include the fee paid to the instructor, the cost of books and materials purchased, and any wages paid to workers for time in excess of their shift hours. In-kind (or hidden) costs would include the wages paid for release time (since those wages were already budgeted, the "cost" is the foregone production), the cost of space donated for the program's use, and materials photocopied or otherwise provided without having to be purchased.

independent contractor; she donated preparation time (minimal, since the class was an individual tutorial) and travel time. She obtained class materials free from the state's adult education program. The company's only other costs were some management time for planning and some photocopying expenses. Additional planning time and expertise to set up the program was donated by the state adult education system.

At the other end of the spectrum was BEST, which involved a substantial start-up investment in training for a group of workers, who would become the program's peer facilitators -- i.e., would learn to provide leadership to small groups of their co-workers participating in the program. Those workers were sent to an outside training course, with training to be updated periodically over a two-year period. The costs for that program were reported as averaging about \$9.00 per contact hour for the first three years of the program.

In every case study site, at least some public funding has been used, if only to get a program started. The funding arrangements have varied a great deal and included the following:

- South Carolina's state-funded Governor's Initiative, which covers instructional costs and provides workforce specialists who market workplace education to companies and to their workers, assess workers' skill levels, and help companies with planning;
- New York's grant through a labor union;
- Individual state grants to cover developmental costs and instructional costs, along with a tax credit which provided companies with an incentive to contribute;

- One state community college system that provided only planning expertise, leaving the rest to the company;
- Massachusetts' three-year grant program in which the company initially received a high level of financial support from the state grant program (The company contributed a 40% match, which could include in-kind donations such as space and release time.) The state financial participation was designed to decline over time; the company had agreed to cover at least some of the out-of-pocket costs in the third year, and in the fourth year, was to assume the full cost of the program;
- Grant funding through the U.S. Department of Education's nationwide workplace literacy demonstration program;
- Statewide funding through North Carolina's community college system which covered the cost of program development and instructor time, but expected that other costs, such as materials and space, would be contributed by the company;
- JTPA Title IIA "eight percent funding," namely, the state-level set-aside that includes a mandate for coordination between the job training system and the education system;
- Other types of JTPA funding (These were discussed but not observed; they are expected to be rare, because of the complicating factor that persons served meet JTPA eligibility requirements, which usually means being unemployed.); and
- Funding through the state's Adult Basic Education system, which may involve working through the local school district. In most jurisdictions,

it appeared that Adult Education funds were available to cover the costs of instruction for any group of ten or more participants.

While the public funds available to assist in implementing workplace education programs can be expected to grow as the field gains recognition, competition for these funds will also grow. Practitioners and experts in the field suggest that it is unreasonable to expect small business to absorb 100% of the costs associated with program design and start-up. However, as workplace education becomes more widespread, businesses foresee that they will have to become responsible for a larger portion of out-of-pocket costs than was being assumed by the businesses contacted for this study. This financial responsibility might take the form of contributing a percentage of overall costs or paying for specific components of the program (e.g., paying the instructor).

Among the programs contacted, public funds generally covered the out-of-pocket costs associated with needs assessment, program development, follow-up and evaluation, as well as instructional costs. Firms contributed staff time in the form of:

- A program liaison, and in some cases a committee, to work with the workplace education specialist;
- Release time for workers to attend a program presentation meeting and to participate in a needs assessment; and
- 50-100% release time or financial compensation for participants in the workplace education program.

Additionally firms provided meeting space for the classes, photo-copying, supplies, refreshments and course completion ceremonies or celebrations.

CURRICULUM CONTENT

Much workplace education theory is based on the notion that contextualized curriculum directly related to participants' lives and interests provides a more effective means of learning new skills than does a generic approach to education. Thomas Sticht offers the following distinctions and comments regarding general, and specific or contextualized curriculum:

Specific or learner centered education is that in which the "functional context of the learner dictates the curriculum." This would include "information and processing abilities, such as those involved in a particular line of work (e.g., automobile mechanic), life role (e.g., parent) or life activity (e.g., reading tax manuals)..."

General literacy education is "aimed at giving the adult learner the same kinds of knowledge and information processing abilities as possessed by typical high school graduates..."

...evidence suggests that "general" literacy education does not transfer much to improve 'specific' literacy in the relatively brief (25, 50, 100) hours of education that adult learners will choose to attend. However, 'specific' literacy training may produce as much improvement in 'general' literacy as do typical 'general' literacy programs.¹¹

Some experts in the field of workplace education have interpreted this point to mean that within the context of the workplace, the most effective learning will occur using job-specific curriculum (e.g., curriculum based on the use of technical manuals, use of work related charts, checklists, etc.) This opinion may also reflect the belief that job specific curriculum can provide a common denominator among workers who have otherwise dissimilar interests.

In addition, job specific curriculum is often thought to be important in the marketing of workplace education programs to employers. However, the literature and

¹¹Thomas G. Sticht, Testing and Assessment in Adult Basic Education and English as a Second Language Programs. San Diego, CA: Applied Behavioral and Cognitive Sciences, Inc., 1990.

study findings indicate that employers' interests and objectives in implementing workplace education programs are much broader than simply reading and writing job specific materials. Indeed, English and math programs were implemented in workplaces where potential participants' jobs required little or no reading, writing or math, as well as in workplaces where potential participants were functioning at very high levels relative to the reading and writing demands of their jobs.

In the companies and programs visited, ESL, English, and math constituted the vast majority of course offerings. These classes ranged from reading tutorials to GED preparation. Other courses offered included: a Licensed Practical Nursing program, introduction to computers, problem solving and pre-management training.

Of the programs visited for this study, only one-quarter were job-specific. Approximately half of the classes were non-job specific in nature, with the remaining quarter combining job specific materials with non-job specific materials. Contrary to the belief of some theorists, the programs that were narrowly focused on job specific curriculum were the least well received. Workers were likely to perceive such programs as an extra chore being imposed upon them to meet company needs rather than as an opportunity to improve their own skills.

Similarly, education theorists have argued that contextualized curriculum -- curriculum directly applicable to participants' life activities and interests -- provides a more effective means of learning new skills than does a generic approach to education. While there sound evidence that a learner-centered approach to education is very

effective, this approach need not always translate into a job specific curriculum. As Paul Jurmo of the Business Council for Effective Literacy points out, a narrowly-defined job specific curriculum may actually fail to address the needs and interests of the learner.¹²

The worker might have already mastered the job without ever having to consult the manual...Or, when confronted with occasional literacy tasks that must be dealt with, the worker might ask a trusted co-worker or family member for help, thereby again maneuvering around the need for strong reading or writing skills....

Or -- to make things even more complicated -- the worker might not really have much interest in the job -- either because the job is basically unrewarding or because the worker knows the job will likely be eliminated in the future. A basic skills program which focuses primarily on literacy tasks found in those kinds of unmotivating jobs might actually discourage the worker from participating rather than attract the worker to the program.

These findings are encouraging because, for the small business, it is not always practical to develop a job specific curriculum. Due to size, most small businesses target programs to address the needs of employees within a wide variety of job categories. In such cases a narrowly defined curriculum focusing on tasks related to a specific job would not be appropriate. This would not preclude addressing math, problem solving or communication issues encountered in the specific jobs of participants. Nor would it rule out, for example, the use of personnel manuals as tools to address reading skills and the understanding of personnel policy. Discussions regarding the structure of the firm, promotional routes and policies can be very useful to participants and employers alike.

Regardless of the curriculum, it is very valuable for instructors to orient themselves to each new workplace. This should include a tour of the company and a basic understanding of its operations. Participation in the needs assessment of the firm

¹²Jurmo, Paul, "Workplace Education: Beyond the 'Quick Fix'" Presented at "Workplace Education: Today and Tomorrow", A Statewide Conference, Worcester, Massachusetts, March 22, 1990.

and of individual participants can also provide valuable information for the instructor. Such information will provide the instructor with a better understanding of participants' day to day lives as well as the structure and tenor of the firm.

INSTRUCTIONAL APPROACHES

Programs visited were fairly equally divided between self-paced classes and those organized on a group basis. One program visited (the BEST program) was facilitated by co-workers. This program is described at length later in this section, as well as in the Appendix A Profile.

Self-Paced Classes

In these classes, group interaction is infrequent. The instructor reviews the progress of individual learners and provides help when needed. Typically, each learner is engaged in an activity separate from the others.

It is important to make a distinction between self-paced individual study within a group setting and individual tutorials. Individual tutorials can be an effective way to reach timid learners. Particularly for new readers, it is often valuable to offer the opportunity for confidential tutoring. Such opportunities are generally available through local voluntary literacy groups. It should be noted, however, that many such programs traditionally based on individual tutoring are now experimenting with small group work as an effective approach for some new readers and writers. Such group work facilitates the use of written language as a tool for communication.

Self-paced classes offer a number of advantages. They are able to address the needs of people with a wide variety of skill levels and interests. A number of self-paced classes included individually based instruction in multiple subject areas within one class. It should be noted, however, that self-paced classes by their nature tend to rely heavily

on instruction through workbook exercises. While this may be effective, for example, in preparing for specific exams, individual study is not likely to be effective in addressing the broader goals (e.g., communication, problem-solving) of many workplace education programs.

Group Classes

In group classes, the instructor plans activities and discussions that can involve the full group of learners, even though they may be at different skill levels. For example, one instructor we observed had brought to class some 50-year-old magazines and asked the class, in teams of two, to pick out a story or picture and describe aloud to each other the similarities and differences between what was depicted (or described, or advertised) in the magazine and its modern-day equivalents. The next step was to be a writing assignment based on those discussions.

Workplace education goals extend beyond improving skills in reading, writing and math to include problem solving, team work, self-esteem and goal setting. These skills can be effectively promoted within a group learning situation. For example, group programs create a forum in which to share ideas with co-workers and provide an opportunity to work on problems in a cooperative setting thus creating experience in communication, team work and problem solving. Should this experience be embedded within a learner centered context in which participants, in partnership with educators and employers, determine course content, such opportunities are amplified as they extend to negotiating the needs of the group, setting goals and evaluating the program.

Learner-Centered Programs

Some of the programs visited incorporated elements of a learner centered approach to education and learning. In other words, they featured classroom content related to the learner's life situation, both on and off the job. For instance, stories and

math problems had to do with managing a household, driving a car, trying to change a vacation schedule, or explaining an equipment failure to a supervisor.

Since workplace education study groups or classes tend to be relatively small (most classes had 8-12 participants), they are well suited to solicit and respond to participant input within the "classroom". Additionally, some programs took the opportunity to hold individual introductory meetings with participants. These meetings, which lasted up to thirty minutes, were used to discuss participants' educational background, job history, interests and goals. In addition to providing an opportunity to begin looking at participant interests and goals, such meetings are valuable in establishing rapport and building trust between the instructor and participants.

Employee Facilitated Programs

The BEST program was developed by the Ontario Federation of Labor, much of whose membership is employed by small businesses. It is an innovative program, currently in its third year of operation. The program is based on a learner centered or participatory model of education. It is organized around study groups of approximately 10 participants. Group participants negotiate goals, decide on program content, and evaluate the program's progress for each of three twelve-week modules meeting over the course of a year. Study groups are facilitated by a co-worker who receives special training in theories of adult education and group facilitation. Initial training for the facilitator consists of a two week intensive session prior to program start-up. This is followed by two additional facilitator training sessions of two to three days during the first program year. Ongoing support is also available from regional program staff.

Typically, groups meet at the beginning or end of the work day. As programs are facilitated by co-workers, meeting times can be flexible. While an outside teacher would not likely be available for a class meeting from 10:00 p.m. to midnight, participants with a shift change at 11:00 p.m. may find this a convenient meeting time.

A co-worker facilitated group can easily make such accommodations as the group and facilitator share the same working hours.

The emphasis of this program is on active co-learning in contrast to the traditional classroom in which the instructor is often regarded as the possessor of knowledge and students as the recipients of this knowledge. Participants and program staff report high levels of comfort within study groups; the comfort is probably the result of the educational approach, and the fact that all group members, including the facilitator, are peers who share a common work life and are often from comparable socio-economic backgrounds.

The BEST program provides opportunities for growth to participants and facilitators alike. Regional staff reported multiple instances in which program facilitators have been offered promotions as a result of the employers seeing them take on and succeeding in new responsibilities from that of facilitator to, in some cases, meeting with managers, making public presentations and holding press conferences.

The program has been well received by employers and participants. Employers benefit from the opportunity to participate in an established workplace education program with minimal start-up demands and costs. Participants express the sense of support they feel working in a group defined setting facilitated by a co-worker and readily contrast this to traditional educational experiences.

OTHER SERVICES OFFERED

In addition to formal course offerings, a number of programs offered related services to workers including tutoring, conversational partners for second language learners, transportation, counseling, and tuition reimbursement programs.

Tutoring

Two programs offered tutoring outside of regularly scheduled class hours. In one case the workplace education instructor was available every Friday afternoon to work with participants interested in additional assistance. While few participants made use of this benefit, they were pleased to have the option. In another case staff members were available to assist participants with course work. Additionally, several supervisors mentioned being approached informally by participants with questions regarding course work.

Conversational Partners for Second Language Learners

Such a program was only attempted in one site visited and was met with little success. The reason offered by interview respondents was that the attempt took place within a workplace charged with racial tensions. The program might have been more successful had native English speakers been more carefully screened to make sure they were not affected by those racial/cultural tensions and would be sensitive to the cross-cultural differences they would encounter in their language partners. Additionally, workshops in intercultural communication would have been useful throughout the workplace.

Transportation

Some companies provided transportation for workers attending off-site classes. While most classes tend to be on site, this service can be particularly valuable to firms offering programs in consortia with other businesses located out of walking distance. Additionally, some firms provided transportation to GED examination sites.

Counseling

While many programs undoubtedly provided counseling regarding community based educational opportunities and other social services within the context of the course, few did so formally. Individual meetings between instructors and participants were not only very useful in establishing rapport and directing course content, but could also provide an opportunity to discuss other resources available to assist participants and potential participants in meeting their goals.

Tuition Reimbursement

Several case study companies had tuition reimbursement programs available to all employees. Generally such programs were more frequently used by salaried employees, in part because hourly employees were often unaware of such programs. Additionally, many such programs are currently restricted to institutes of higher education making them inaccessible to those with less formal education. However, the presence of these programs was noted by some of the hourly employees as an additional incentive for pursuing a GED.

MEASURES OF SUCCESS

Measures of program success are a function of the individual objectives of each program. These, of course, vary widely from firm to firm. Many employers expect workplace education programs to have a positive effect on the quantity and quality of work produced. However, they view the investment in education as having a long-term payoff that has to do with the program's impact on morale, self-esteem, turnover, promotability, and perhaps opportunity to participate in more job specific or technical training due to newly acquired skills. In none of the programs visited was increased production or quality or work specified by interview respondents as the primary or immediate goal of the program. Managers and service professionals seemed to have

established more general or less quantifiable goals, such as the number of learners completing the program, achieving educational objectives (e.g., passing the GED exam), reporting satisfaction with the program, or continuing to be interested in participating. More specific goals may endanger the program if those goals are not immediately realized, or they may jeopardize worker interest and participation if they cause the program to be perceived as a way of "speeding up" the production process without corresponding increases in pay. It should be noted that one of the employers visited did in fact speak with pride about the overall productivity increases in his plant since the introduction of the program. However, he credited the employees as much as the program for those improvements. Other respondents have said that a workplace education program's effect on productivity and quality of work should be expected to be indirect, an outgrowth of improved self-confidence and morale.

As workplace education programs for hourly employees are a recent development within the small business community, the companies contacted for this study tended to be in the early stages of program implementation. None had been in operation for more than one year. Thus, most programs were not in a position to have gathered significant quantities of program evaluation data. Furthermore, companies were generally disinclined to do so. Typical evaluation procedures included asking participants and in some cases supervisors to respond to evaluation questionnaires. Instructors occasionally commented on the general progress of the class at the aggregate level. Information regarding individual participants' progress specific to the classroom was generally held confidential between the instructor and participant. Employers often noted retention rates and the number of participants successfully completing the GED exam as well feedback gained from informal conversations with supervisors and participants as a means of assessing program effectiveness.

Within the scope of this study, the most concrete indication of program success is employer interest in continuing program offerings. All firms participating in the study

plan to continue their programs. Many expressed a willingness to absorb an increased proportion of out of pocket expenses associated with program implementation.

The strongest indicator of program success from the participants' perspective is the expressed desire to have programs continued and interest in the opportunity to participate in additional course offerings. Participants response to questions about the value of the program was often testimonial in nature. Many participants said they had been considering going back to school for a long time, but had not found the opportunity to do so. Many felt that the program whet their appetite to continue their studies. Some told of plans to continue course work at the local community college. Others hoped course offerings at the worksite would be expanded. Several saw the program as an opportunity to prepare for job transfers within the same company. An older production worker anticipated moving to an office job which would be less physically taxing.

Participant Critiques

While generally expressing enthusiasm for the program as a whole, in a few cases participants expressed disappointment in the course presentation and content. Participants in two classes felt that their teachers had not received sufficient training in working with adult learners or simply were not inclined to be sensitive to their needs. In one of those companies, where the Director of Human Resources regularly solicits input from workers, participants' concerns led to the teacher being replaced. No such resolution was reached in the other company as there was no formal means of gaining participants' feedback. Workers at two other companies expressed enthusiasm for the program in general, but felt the course content was weak and unrelated to their needs.

While employees were generally provided the opportunity to fill out course evaluation forms, such questionnaires are often circumscribed in nature. Additionally, participants expressed reluctance in expressing their concern via this format due in some cases to affinity for the instructor, or because they were afraid such comment would

reflect poorly on the program as a whole, which they valued highly. Additionally, relying on written evaluations to gain participant input severely curtails the opportunity to receive input from many non-native speakers of English and new writers. This indicates the need for additional avenues of employee input.

Program Outcomes

In examining program outcomes, it is useful to recognize the relationships as well as the distinctions between (1) employer objectives and employee objectives, and (2) classroom objectives and workplace objectives. These four perspectives are not mutually exclusive, but rather interdependent. It is therefore reasonable to expect considerable overlap in program measures of success represented by the differing perspectives. For example, the impact of a program on employer reported objectives (e.g., self-esteem, promotability, reduced turnover) will be more significant if employees participating in the program feel the course is valuable and feel successful in their efforts. Conversely, attempts to measure program success solely by academic means (e.g., increased reading scores, units completed, etc.) ignores the effect of the program on the workplace. Additionally, when examining the effect of the program on the workplace, it is necessary to consider the appropriateness of instructor and course content, supervisor's support of participants, and the opportunity to apply new skills within the workplace, that is, if the goal is increased participation and suggestions or input are not considered and responded to, participation is not likely to increase.

ORGANIZATIONAL MODELS

Study findings indicate that while there is much discussion among planners regarding alternative models of program implementation, to date there is little evidence of well-developed models within the field. Most programs within the small business community are developed in a traditional top down fashion, on a firm by firm basis with

the assistance of outside technical expertise. Nonetheless, several alternative organizational models were identified. Four such models are discussed below.

Consortia

Two types of workplace education consortia were identified. The first provided programs for a group of firms within an industry while the second was geographically based. In the first case, groups of like businesses were brought together by a service professional acting in a planning/consulting capacity. As a result, each of the participating businesses was able to offer its employees a wider variety of classes than it could have on an individual basis. In one case two neighboring nursing homes collaborated to offer two levels of ESL classes. In another, a group of three employers from different industries came together to offer a continuum of classes which included: intermediate levels of English and math, a high school diploma program, and ESL. All classes were held at one of the three participating businesses. Businesses provided transportation to and from classes for employees participating in classes held at a business other than their own place of employment. In addition to allowing consortium members to offer a broader range of courses, an industry based consortium facilitates the incorporation of job specific curriculum.

A geographically based consortium is currently being organized in Rutland, Vermont by an association of personnel executives in conjunction with the state's Department of Education. Between seven and nine of the association's members are expected to participate. These companies range in size from 100 to 600 employees, with an average size of 190. Each participating company represents a different industry. The program is expected to offer various levels of math and English instruction and offers several advantages. First, it provides an opportunity for a group of employers, who already have an established relationship, to educate themselves and develop strategies to meet the educational needs of their companies. Additionally, because the area is comprised of a large number of small businesses, the Department of Education

plans to use the consortium as an opportunity to examine the special needs of small businesses related to the provision of workplace education (e.g., how to provide learning which is sufficiently cost effective without depleting the workforce). And finally, the consortium is expected to offer a much broader range of classes than would be possible for any one of the firms on their own.

Large Helping Small

Many large firms have well developed education and training programs making them a potential resource for small businesses interested in offering similar programs to their employees. Large firms may be in a position to offer technical assistance in program development, to sponsor programs or to make seats available within their own programs. Study investigations indicate that currently, relationships of this type are primarily focused on management training. One notable exception to this is NAPL's program described below.

Industry Wide Program

In effort to address the workplace education needs of its membership, the National Association of Printers and Lithographers (NAPL) is creating a guide to program development and industry specific curricula. NAPL is currently field testing curricula in each of the following areas: English, math, critical thinking and problem solving, and industry processes.

NAPL is a not-for-profit graphic arts trade association. According to the Association, the graphic arts industry is composed mainly of small businesses. Ninety three percent of the 30,564 firms have fewer than 50 employees, and two-thirds have fewer than 10 employees. The project is jointly funded by NAPL and the Didde Corporation, a major supplier of capital equipment to printing and packaging industries.

Thus, the NAPL program is an example not only of an industry wide approach, but also, a large business helping smaller businesses.

Provider-Centered Model

This was not so much a distinct model as the "residual" arrangement (the absence of any particular model) which was operating in the majority of small business workplace education programs we encountered. A provider-centered arrangement is one in which the primary relationship is between the individual company and the local service professional representing the state education system or a pilot project. Usually a single service provider has many such relationships with employers, each independent of the others.

The most frequently-observed form of this model included the "workplace education specialist" or "workforce specialist" in a particularly key role at the time of program startup. The functions of most importance included:

- approaching the employer with the idea that workplace education could benefit both the company and the workers -- citing the kinds of arguments presented in Chapter I of this report -- and persisting until the company agreed to try the program;
- talking to a variety of people within the company to get an understanding of the workplace and the needs of the company and the workers, whether or not this activity was formal enough to be termed a needs assessment;
- helping company managers decide what type of program(s) would be most useful and how they should be designed;

- helping with logistics or at least knowing the details of what the company needed to do and decide in advance of the program;
- making sure that the funding for the program was adequate, whether through a grant or other subsidy, or with the help of the company;
- presenting the program to workers and helping the company communicate successfully with workers about the program, its purpose, and who should participate;
- assessing individual workers' instructional needs;
- arranging for an instructor and sharing with the instructor the information gathered about the company, workers, and instructional needs;
- staying in touch with the company and workers while the classes are going on, in order to make sure that they are successful and help in resolving any problems that may arise; and
- gathering information needed to evaluate the program.

In several of the communities we visited, the predominant "model" was simply a number of independently-operating programs. The service provider, much like the hub of a wheel, served as the only point in common among these programs.

IV. CHARACTERISTICS OF SUCCESSFUL PROGRAM OPERATIONS

ESTABLISHING A POSITIVE ATMOSPHERE

Case study interview respondents -- particularly workplace education specialists -- indicated that the most critical element in creating a successful program is to establish an atmosphere of trust. They had learned from prior experience with other programs that workers -- particularly those with the most pressing educational needs -- often misinterpret management's motives for implementing workplace education programs. Workers fear that the program will be used as a mechanism for selecting among employees, with the less successful workers losing their jobs. Many factors, respondents said, influence the way workplace education programs are received. They pointed to three prerequisites for establishing a successful workplace education program:

- A careful and thorough planning process that includes a variety of perspectives;
- Visible support for the program from top management; and
- Clearly demonstrated (and clearly communicated) benefits that both workers and managers can expect from the program.

Careful Planning

Time and again workplace education specialists stressed the importance of planning for the education program. Several respondents indicated their planning process was more time consuming than anticipated, but they felt that the amount of time invested in planning directly influenced the strength of the program. Elements considered to be important to the planning process included:

- soliciting and using input from individuals at all levels of the company;
- considering carefully all of the logistical issues involved in the design (such as how to schedule the classes, whether the workers should get paid or unpaid release time, and where the classes should be located);
- anticipating potential problems in advance (such as competing uses of the space, transportation difficulties for workers who are part of a carpool); and
- creating in advance an advisory committee or assessment team to serve as an on-going "feedback loop" to stay informed about how workers, supervisors, and others are reacting to the program, trouble shoot, communicate with management and with outside service providers, and resolve problems as they arise.

These issues are discussed in more detail later in the section on Program Logistics.

Support from Top Management

The top management of companies visited for this study demonstrated support for the workplace education programs in a variety of ways, all important to generating worker enthusiasm for the program. Among the most important were the way the program was described to all employees, the quality of the space, materials, and other in-kind support the company made available to the program, and the decision to pay for some or all of participants' time spent in class. Many companies provided participants with supplies and refreshments during class meetings. Most companies offer special recognition for those completing classes or achieving major educational goals: certificates, awards ceremonies, or celebrations, including a catered buffet or a group

lunch at a local hotel. That participants valued these efforts is clear; in at least one company they brought their dress clothes to work in honor of the occasion.

Communicating Program Goals

Expert respondents and service professionals stated that, because workplace education for hourly employees is still a relatively new concept in this country, a program that is not accompanied by clear communications runs the risk of being misunderstood. To gain acceptance of the program throughout the company, they said, top management needs to communicate the program's objectives with people at all levels of the organization. Respondents pointed out the value of keeping the entire company informed about the program even if it is planned for only one department. They indicated that management must make clear how the program is expected to benefit the individual worker as well as how it will help the company, and how the program fits into overall company objectives. Such efforts garner support for the program, reduce misunderstandings of the program's intent, and reduce employee anxiety about admitting that he or she needs help.

Some of the managers interviewed had learned the importance of making clear the link between the program and actual, current company goals. For instance, employee development was sometimes linked to the goal of reducing high turnover rates. This practice has the advantage of making sure the program is credible, heightening employee trust, and protecting the program in case of competing priorities. Several firms expressed more general program goals, for example, civic mindedness, or the desire to contribute something to the local community. While such goals may be laudable, some of the managers interviewed warned that programs not linked to concrete company goals run the greatest risk of being cut. Additionally, a participant's time off to attend classes may reduce production in the short run. Short-term production losses can make supervisors reluctant to release participants, or cause animosity among co-workers concerned that profit sharing benefits will be affected. Communicating to

workers at all levels of the company that the program's objectives are part of the firm's overall goals can help circumvent these problems.

UNDERSTANDING WORKERS' MOTIVATION TO PARTICIPATE

As Carnevale et al. pointed out in Workplace Basics: The Skills Employers Want, without employee support, workplace education programs will never leave the ground.¹ This section discusses factors influencing workers' motivation to participate in workplace education programs.

Case study respondents characterized the elements of successful start-up (careful planning, top management support, and communicating goals) as important to gaining program support from all levels of the company and ensuring program success, and also as important factors increasing employees' desire to participate in the program. Ongoing support of top management facilitates temporary adjustments in the workplace necessary to encourage or remove barriers to worker participation. Production quotas may need to be temporarily altered to account for reduced time on-line. Companies where employees work flexible shifts have found it useful to establish temporarily a fixed schedule for program participants. Other factors important to workers' desire to participate in workplace education programs are discussed below. These include developing a partnership approach to the program, using sensitive recruiting strategies, and maintaining confidentiality of test scores and individuals' progress within the program.

¹Carnevale, Anthony P., Leila J. Gainer, and Ann S. Meltzer, Workplace Basics: The Skills Employers Want, The American Society for Training and Development and the U.S. Department of Labor, Alexandria, VA, 1988.

Partnership Approach

Those who have experienced success with their workplace education programs report that their success depended in large part on recognizing such programs as partnerships which are mutually beneficial to employers and employees. The partnership approach alleviated anxiety and promoted learning. Regardless of the content of the course, employers reported that their programs benefitted the company substantially by making employees in general, and program participants in particular, feel their needs were being addressed. As one employer pointed out, "The program is perceived by participants, as well as by others in the shop, as a positive effort on the part of the company which is above and beyond the norm."

How employees perceived their employer's reasons for implementing the education program strongly affected the worker's interest in participating. If employees thought the program would primarily benefit the employer, they greeted it with considerably less enthusiasm than programs perceived as also benefiting employees. In some companies we visited, workers saw courses as an additional task rather than an opportunity for precisely these reasons. Similarly, at two of our cases study sites, workers saw little benefit in the courses offered because the contents of the classes were presented in a vacuum, with little obvious connection to their lives at work or elsewhere.

Several companies visited solicited worker input in determining course content. Worker input ranged from influencing the level at which a particular course was taught (basic versus intermediate), to the choice of specified offerings (e.g., English or math). The firm with the most extensive worker involvement had a standing education and training committee with worker representation and a formal needs assessment which included extensive worker input. These topics are addressed more fully below in sections entitled Structural Components, and Needs Assessment.

One factor which may influence workers' enthusiasm and ability to participate is the decision to provide classes during normal shift hours and/or pay workers for time spent. This decision is discussed below in the section on Program Logistics.

Sensitive Recruiting Methods

A number of employers noted that it was more difficult to gain participation of employees with lower levels of formal education. Service providers also indicated that it was not atypical for workers with more formal education to come forward first. However, service providers noted that after the program gained a track record as a positive opportunity, workers who had initially been reluctant often decided to participate. These experiences point to important lessons for those recruiting workers with relatively little formal education. First, several respondents expressed the belief that addressing the needs of all employees, regardless of educational background, was one way of promoting a general positive perception that education is for everyone, thus reducing the stigma for those workers with low levels of formal education. Through a combination of programs (e.g., referrals to volunteer reading tutors, on-site classes, and tuition reimbursement) some of the companies we visited found it possible to meet the needs of a broad range of employees. Second, programs attempting to gain the participation of workers with little formal education need to recognize the challenge they face and consistently reach out to these workers in a series of ongoing communications (or announcements of subsequent program cycles). We discuss below some of the specific strategies that case study companies used successfully.

The way an employer presents a program has important effects on the way potential participants view the program and the extent of their interest. Typical successful recruiting strategies included posting notices on bulletin boards and putting announcements in pay envelopes. Notices of this type invariably emphasized that the classes were for all employees and avoided language that could be seen as condescending or stigmatizing. The majority of companies visited for this study also

held group meetings with employees to discuss the program and sign-up procedures. Presentations of this type were generally made by a management representative, the project consultant, and, where employees had been involved in the planning process, a union or employee representative. Additionally, the program teacher often participated in the presentation.

Numerous respondents discussed the influence of language on employees' perception of the program and classes offered. Many respondents indicated that they preferred the term "workplace education" to "workplace literacy" because "literacy" carried the implication of participants having limited skill levels. Course titles such as basic skills, or basic math imply that potential participants lack skills rather than emphasizing the opportunity to acquire new skills. Several programs simply refer to their classes as English or math classes with no suggestion of level. Many programs were open to people with a variety of skill levels. Others defined specific course content only after discussing individual needs and interests with employees who wanted to participate in the program. Such issues of terminology were not a problem for classes outside of traditional academic areas (such as team building or problem solving) since their announcements and course titles were less likely than others to evoke the emotional overtones of past failures in school.

Respondents pointed out the importance of allowing people to sign up for courses in a private situation to reduce the possibility of embarrassment. One provider learned that lesson the hard way. He had once held a group meeting of potentially interested employees, and requested that those interested fill out forms on the spot. One seemingly interested man hesitated, was urged to complete the form, and finally, painfully, responded that he was unable to read. Since that time, the provider has asked interested employees to take the form home, fill it out, and return it.

By contrast, a number of respondents reported that employees were so eager to sign up for classes that they spoke up during the initial group presentation, seemingly

oblivious to embarrassment. In one such meeting, an employee stood up and said, "If this is going to help me learn to read, sign me up."

Other respondents who encouraged sign-ups at the group meetings also identified alternative ways of expressing interest -- individuals such as the personnel director, supervisors, shop stewards, or the workplace education specialist or outside instructor, with whom employees could speak privately about the program. This proved to be a valuable strategy. In one case several employees independently approached the personnel director to indicate their interest in the program. They were concerned that their low reading skills would prevent them from participating. The company arranged for them to meet individually with reading tutors. At the employees' request, these tutorial sessions took place off-site and were treated in a confidential manner.

Confidential Treatment of Test Scores and Student Progress

Confidentiality of employees' test scores may be legally mandated. Two pieces of legislation protect learners: the Family Educational Rights and Privacy Act (FERPA) of 1974 (as amended in 1988) and Title VII of the Civil Rights Act of 1964. FERPA protects the confidentiality of student records related to educational programs receiving public education funds. Title VII of the Civil Rights Act prohibits employer use of discriminatory tests in making any employment decision. Most employers visited had chosen to maintain confidentiality of records not for legal reasons, but rather to eliminate any possible barriers to worker participation in workplace education programs.

Assuring workers that test scores will be held in confidence between the participant and the education provider reduces anxiety related to job security and encourages employee participation in the program. With one exception, all programs visited maintained strict confidentiality of test scores and individual progress reports. Where standardized tests were used, only aggregate scores, if any, were shared with

employers. Additionally, the specific courses in which individuals were enrolled were frequently held confidential.

This study's findings about worker motivation were echoed by the results of a Philadelphia in which executives commented on their beliefs about the barriers to worker participation in a workplace education program.² The factors cited most often were (1) a concern for the worker's own reputation (negative effect on career and stigma among peers), (2) fear of failure and the associated fear of losing their jobs if they failed, and (3) mistrust of management motives (e.g., believing that the program is a way of weeding out the least educated workers). The importance of those barriers was recognized by case study companies, and they designed their programs to be sensitive to sources of stigma, supportive and encouraging, and open in communicating management's reasons for undertaking the program.

KEY DESIGN FEATURES FOUND IN SUCCESSFUL PROGRAMS

We observed -- and case study respondents discussed -- several specific design features or structural components which appeared to be consistently associated with enthusiastic worker response to the program as well as high program quality. These components include conducting programs on a voluntary basis, establishing an in-house liaison to help with program-related communications, and appointing an education and training committee that is representative of workers at all levels in the company.

Voluntary Participation

Employers can require workers to attend courses, but such a requirement influences the extent to which participants actually engage themselves in meeting the requirements of the class. Voluntary programs, on the other hand, build trust, lend

²Omega Group, Inc, "Literacy in the Workplace: The Executive Perspective," Haverford, PA, 1989.

credence to the idea that the program should benefit both the company and its workers, and reduce workers' anxiety about their job security. Moreover, several respondents pointed out that people learn not when they are told to learn, but when they want to learn and when materials offered are meaningful to their lives. In the words of one employer, "In offering classes, there are really two choices. You can test everyone, assess their level, and try to bring everyone up to a certain level. Alternatively, you can offer the opportunity to improve skills, acknowledging that potential participants know what they can and cannot do and what additional skills are valuable to them. The second option will lead to good results." Finally, involving the workers most eager to participate in the program first encourages early success. Later positive word-of-mouth publicity from those workers can motivate more reluctant or self-conscious employees to participate in subsequent program cycles.

This does not mean that required courses have no usefulness. We observed two instances of mandatory participation, both with positive effects. However, those instances involved specific circumstances that made mandatory participation logical. One involved a particular category of workers -- first-line supervisors with quality control responsibilities -- and was necessitated by the introduction of statistical process control and associated computer equipment.

Another employer -- a Canadian hospital -- had recently established a new department as a self-managing team. All members of the team participated in a problem solving class, with additional courses planned for the future. Within this context, the employees felt that the courses support the overall goal of the self-managing work team. It is important to note, as well, that employees had voluntarily applied to transfer into this department specifically to take part in the self-managing work team.

Other instances in which required participation may work effectively include short-term department-wide or company-wide training -- for example, workshops related to the organization and strategies of the firm, its position within the industry, or an

overview of jobs within the firm. Such programs are generally later incorporated into the orientation given to new employees.

In-House Liaison

Several of the programs we visited attributed their success in part to the fact that they began by identifying an in-house liaison to monitor the program and keep in touch with the workplace education specialist, potential and current participants, instructors, and management. Such a liaison should be a "neutral" person within the company structure, not a representative of management, but a person able to communicate effectively with managers. The liaison serves as an intermediary, a clearinghouse for feedback on the program, and a way to monitor and adjust the program as necessary. Instances in which a liaison's intervention proved particularly helpful included:

- Recognizing and communicating a program's need to replace an abrasive instructor;
- Intervening and mediating when a supervisor was reluctant to allow a participant release time away from the department, because the department had tight production quotas to meet; and
- Investigating a reduction in class attendance, which proved to be the result of a change in the company's shift schedule, such that the shift ended one hour prior to the beginning of class.

Representative Education and Training Committees

These are committees consisting of workers at all levels within the company -- hourly and supervisory. Such committees have been successfully used in place of, or in conjunction with a staff liaison to monitor and troubleshoot the workplace education

program. Workplace education specialists with experience in a number of settings believe that committees offer a number of advantages. For example, they can provide program stability. During the course of the study, the study team learned of a number of programs that had ended because the person with primary program responsibility was no longer with the company. A committee framework avoids exclusive reliance on one individual and thus facilitates the ongoing success of the program. Representative committees are also an effective means to promote outreach, facilitate feelings of trust, and provide representation of different perspectives. Additionally, such committees can serve as a model to encourage communication between staff at various levels.

The formation of an effective committee is easiest when its roles and responsibilities have been clearly defined. Additionally, accommodations may be necessary to allow committee members to fulfill their roles effectively. Hourly employees can provide, among other things, a valuable outreach component and source of input and suggestions from program participants. If they are to succeed in this role, their mandate must be clear. In addition to meeting time, members may need to have an hour or two per week set aside to tour the workplace, discuss the program with co-workers, answer questions, and solicit feedback. They may need time for training in how to conduct the committee's work. They may need to spend some time learning to communicate with persons in other job categories without feeling hesitant. Thus, setting the stage for the committee can be quite important. Committee orientation might include discussion of the company's goals in implementing the program and enlisting representative participation, workshops, presentations, or discussions on the history and theory of workplace education, exercises in effective group work, active listening and problem solving.

PROGRAM LOGISTICS: TIMING, FREQUENCY, DURATION, AND LOCATION

Once a company has decided to pursue a worker education program, managers must make several decisions which shape the program and which will have a strong effect on its success. These decisions have to do with logistical factors such as:

- the frequency and timing of classes;
- the timing of classes; and
- the location in which classes meet.

Timing and Frequency

The most commonly observed weekly schedule of classes in the case study workplace education programs consisted of two sessions per week of two hours each. Those classes were typically scheduled to overlap the end of one shift and the beginning of the other, so that for workers on each shift, one hour was within the normal work day and one was either before or after the work shift. In other words, in a plant with a shift change at 2:30 p.m., the class would begin at 1:30 and end at 3:30. Variants of this schedule included shorter sessions (1-1/2 hours, one hour, or even less) and more frequent sessions (as many as four times per week). Two companies had arranged to hold 45-minute classes four days per week during the lunch hour. One company stated that their employees had expressed a preference for that schedule rather than attending classes either before or after the regular work day. Workers had cited safety issues in the neighborhood as the main reason for wanting to leave the building at the same time as everyone else rather than staying late. However, for sites operating more than one shift, the "overlapping shifts" was by far the most popular schedule, minimizing inconvenience to workers from each shift.

Duration

Only a few of the case study companies conducted ongoing (open entry open exit) classes.³ More frequently, sessions of classes begin and end on specified dates, accompanied by special recruitment efforts before they began and public recognition of completers accomplishments when they ended. The duration of such sessions ranged from five to twenty-six weeks, with between 20 and 100 total hours spent in class.

Three of the companies visited set up more ambitious year-long programs to accomplish particular goals, such as to prepare learners for a new production process or to work effectively in a self-managed team. The classes were divided into four 10-to-12-week sessions, with some time between sessions; however, the same group of participants was enrolled in each of the four sessions, since they were part of an organizational "project" for which the year-long class was preparing them. This arrangement has the advantage of balancing the need for an occasional break in routine with the need for an intensive and continuing learning effort.

Several companies did not hold classes during the summer. Managers believed that it was important to recognize that employees' vacations and family responsibilities tend to be concentrated during those months.

Location

Nearly all of the companies visited conducted their classes on the premises, and they all emphasized the importance of having the classes in a convenient location. Some interview respondents also stressed the importance of the physical space used for classes; it should be a quiet, well-lighted, clean place, a place to which workers are proud to

³Those companies were usually, but not always, among the smallest visited, with classes in which individual students proceeded at their own pace, following an unstructured "tutorial" format that relied heavily on workbooks and written assignments.

come, a place which made them feel special. The examples cited even included the meeting table in the boss's office, though some workers might find that intimidating. Sometimes finding an attractive location on site in a small company was a challenge, particularly in companies with a noisy or public environment, or where most of the workers' time is spent outside the office.

One company used its lunchroom to hold classes; this was a plain environment with five or six small tables. The manager reported that this space worked well for the company, because they could often accommodate different learning needs within in the same large classroom space, using individual tutors for ESL students while the teacher conducted small-group activities with other students. Another company used a relatively small all-purpose room dominated by two end-to-end work tables in the center. This room was also used for meetings with visitors, employee lunches and breaks, and as a general meeting place. The walls of this room, already covered with announcements, were at the time of the visit decorated with maps and illustrations of the topics being discussed in classes. These decorations serve the purpose of arousing the curiosity of workers not already involved in the education program and stimulating interest in future enrollment.

One case study firm reported that it did not have a suitable space for conducting classes. Nevertheless, the company held the first two meetings of each series on-site, with the remainder at a nearby Adult Education Center which has extensive facilities and equipment. The most important factor, these managers said, is that the classes be convenient to the worksite. The company attempted to counteract the inconvenience of off-site classes by paying employees for the time needed to go to and from the off-site center.

More typically, respondents described off-site education as being better suited to individual employees who have the strong motivation and self-confidence needed to follow through with their education goals -- e.g., at the college level, or to complete a

series of courses designed to meet a specific need. Occasionally, workers who had completed an on-site program and received their GED would go on to participate in such programs, perhaps even taking advantage of the tuition reimbursement policy offered by their employer.

THE IMPORTANCE OF PAID TIME AND RELEASE TIME

We found considerable diversity of opinion among company managers and service professionals regarding the importance of paid release time for employees participating in workplace education. Most respondents believed that at least some paid time was essential as a signal of management support for the program. Indeed, the most frequently-observed arrangement was that the employer paid for one-half of the workers' time spent in class.

A few respondents emphasized the importance of workers making at least some contribution of time to their own self-improvement, as a kind of investment to assure that they valued the opportunity. Workers' receptivity to such an arrangement would be expected to depend heavily on the nature of the course content. A worker might be expected to be uninterested in participating if he or she saw the course as strongly focused on job-specific content, and thus primarily designed to yield short-term benefits to the company rather than long-term benefits or generalizable knowledge which would also be useful to the worker.

One nationwide expert estimated at least 80% of employers reimburse workers for at least part of their time. Five of the companies visited reimbursed workers for 100% of the time spent in class. They differentiated between paid release time -- time normally spent on the job within the employee's shift hours -- and paid additional time -- occurring outside the normal shift hours. Several companies scheduled their classes so that they overlapped two shifts, so that workers from both shifts could participate conveniently. This schedule meant that workers were only diverted from production for

one-half of the total time spent in class. This schedule made the program easier to "sell" to supervisors or department heads worrying about production quotas.

We did not encounter any companies that paid an overtime premium for additional time spent in class. (Time-and-a-half pay would only be required if the workplace education program (a) were mandatory and (b) resulted in a work week in excess of 40 hours.) One company noted, after trying a partly-paid arrangement, that the second hour (the one not reimbursed by the company) was less well-attended than the first, with workers citing carpooling or child care needs.

V. ROLES OF KEY PLAYERS IN WORKPLACE EDUCATION

THE ROLE OF THE EMPLOYER

During case study visits to 18 companies, we found small businesses taking on many different types of roles in relationship to the workplace education programs in their companies. Some examples of these roles are described in the paragraphs which follow.

Construction Company (50 - 100 Workers): The owner had been initially "shocked" into awareness of his own company's need for workplace education when he accidentally discovered that one of his best workers had never learned to read. This worker had the skills and experience to be promoted to a supervisory position, with one exception: the job required reading and preparing production schedules and reports. Dismayed that he was unable to promote the worker into a job where he was needed, the owner began asking around and discovered that the local community college could provide an on-site teacher at no cost if the number of interested students was sufficient to meet the college's funding requirement. The owner began to talk to other workers and discovered that the interest was there. The employee who could not read now has his GED and his promotion, and takes great pride that he is now "smarter than his wife." The business owner now takes a personal interest in the progress of each individual worker in the class and is quick to recognize and reward workers whose increased self-confidence enables them to take on greater levels of responsibility. He has invited employees' families to join them in the class if they wish.

Manufacturing Company (101 - 250 Workers): The plant manager reported having taken the initiative to investigate the need for a program within his company. He did so because he had been reading a report citing statewide and nationwide statistics about the levels of educational achievement among production workers in manufacturing companies. This increased awareness of the issue had prompted him to ask his personnel

manager to find out how many of the plant's workers had less than a high school education. After finding out the number was alarmingly high, the manager made a telephone call to a friend and found that the local community college could help him design and manage a program. He then approached the local union leaders to see if they were interested in becoming a partner in the education venture. Now the company and the union share the cost of the program, and the union president is an enthusiastic learner.

In addition to his initial role as a strong catalyst for the program, this plant manager played an important public relations role for the local community college that helped set up the program. He believed so strongly in the importance of the program's and workers' achievements that he was anxious to publicize them. He also credited the workplace education program with enhancing the company's credibility as a supplier of high-quality merchandise (through decreased error rates and increased ability to carry through with quality control) in the eyes of major corporate customers.

Manufacturing Company (101 - 250 Workers): Another plant manager has become highly visible throughout his state in recent years as an educator of his fellow employers. He uses Rotary Club speeches as the medium by which he spreads the word about the benefits to both workers and companies of starting workplace education programs. This employer is strongly convinced that his own program has resulted in measurable gains in productivity -- as well as worker morale, involvement in the work place, and work force stability over time. He believes that other employers truly need to learn from his example and also to become vocal advocates for such programs. His strong belief in the benefits of the program, and his one-on-one encouragement and praise for worker achievements in the program and on the assembly line, have led to an environment in which over one-half of all workers in his plant have participated in the program.

Manufacturing Company (251 - 500 Workers): A small business owner or manager -- especially in a rural area or small town -- is often asked, simply because of his or her standing as a community leader, to serve on the local area's Private Industry Council, or the Roundtable or Planning Council for a statewide workplace education initiative, or on a local community college's industry advisory board. One of our interview respondents was this company's Plant Manager, who was serving in such a capacity. As a former educator and a business leader, his perspective was helpful in the program's planning process. At the same time, he found out that his own company benefitted from his civic involvement. The workplace education program in his company was able to learn lessons from other program's mistakes. He was able to get the area's top teacher involved in his program. Unlike some of the other programs described, he found it useful to conduct several short six-to-eight week series of classes, each on a specified topic. One such class was designed for a particular group of employees, who would soon be using new equipment. All the workers in that category were expected to participate, but others who were interested also signed up. Another class on Business English was voluntary and open to everyone. The manager found, perhaps like many other small business executives, that service in a voluntary civic role is a difficult time commitment to make. However, that service can often pay off within the company by (1) sharpening the employer's awareness of the benefits of workplace education, (2) introducing the manager to resources and expertise that prove useful in starting a program, and (3) making available technical assistance to enhance the quality of the company's program.

The situations described above are exceptional. The typical small business owner or manager is too absorbed with the details of day-to-day management to consider longer-range projects. Even when they undertake long-range planning efforts, they think of building for the future first as weighing the pros and cons of (1) acquiring new equipment, (2) using new or improved materials or supplies, or (3) revamping procedures or production techniques to keep pace with others in the industry. Generally speaking, small business owners and managers -- according to experts interviewed in this study

including some small business representatives -- do not yet see building the basic skills of their workers as the usual kind of investment to be considered. Conditioned by many years of labor surplus, they still think first of hiring when they encounter a new skill need.

Factors that Increase Acceptance by Owners and Managers

Small business owners and managers who fit the typical pattern described above have been in the position of having the concept of workplace education initially "sold" to them by a provider or publicly-funded program coordinator, only later to become advocates for the program. When providers and program coordinators approach small business owners, the chances are that they will not immediately find a receptive ear. The following types of circumstances increase the chances that they will be successful right away in selling the program:

- The company is planning a major change, such as introducing a new production process or equipment, that will require new skills of several workers;
- The company has experienced difficulty recruiting qualified workers or has noticed deficiencies in basic skills among job applicants;
- Someone in a decision-making role has been reading reports or articles about the need for workplace education and has already recognized -- but not acted upon -- the need within the company;
- Word of mouth (or local media coverage) has given credibility to the program; and

- Someone in a decision-making capacity is predisposed to appreciate the value of education. For example, one manager we visited had a background as an educator. Others may have experienced personally or at close range the types of roadblocks that individuals face if they lack basic skills.

Whatever their initial role in starting a workplace education program, employers have several crucial roles in assuring its ongoing success. The chief executive must be among the strongest (and loudest) supporters of the program, or the slightest downturn in attendance -- or the first complaint about lost time from a line supervisor -- will cause the program to falter. The most successful programs have taken place in companies where top management has made clear not only their commitment, but also management reasons for valuing the program -- reasons that include but are definitely not limited to the workers' well-being. The employer's role also includes taking the time (or making sure that a middle manager takes the time) to follow through with efforts to recruit workers, develop positive communications about the program, solve logistical problems when they arise, and recognize -- and celebrate or reward -- workers' achievements.

Among the most important contributions an employer can make is the shaping of attitudes toward workplace education within the company. If top management views adult education as a normal and constructive use of time and resources, and if communications about the program reflect that view, workers will welcome the program enthusiastically. The result of their enthusiasm will be a strong program, well-attended classes, and notable worker achievements in the classroom and beyond.

Employer Roles Outside the Company

Other types of roles for employers are less obviously connected to their own company's operations than to the larger challenge of enhancing effective workplace education programs in general. Those other roles are, however, extremely important and

can only be filled effectively by employers who have experienced success in their own workplace education programs. Some examples of those roles are:

- Educating fellow employers at the local level about the advantages of starting workplace education programs. Experienced employers are by far the most credible and convincing sources of those messages for other employers. Business organizations are among the best forums for reaching other employers;
- Building relationships with local service professionals in order to enhance those professionals' understanding of employers' needs, and thus helping them to develop their ability to meet those needs effectively; and
- Spreading the word more broadly, by publicizing their own program's successes, or by providing information about the program to others who will publicize it.

Similar suggestions were given by a group of executives interviewed in a Philadelphia study, who recommended several approaches interested companies can take to improving literacy:

- Businesses can donate employees' time as volunteers and encourage them to do so.
- They can highlight their own and other success stories and spread the news.
- They can advocate for increased prevention -- e.g., competency testing in the schools, attention to federal funding for education.

- They can publicize the advantages (including PR) that accrue to a company that invests in workplace education.

The discussion above has been devoted to roles best played by the chief executive or chief operating officer of the small business. Persons in other positions within small business are also quite important. The human resources or personnel manager has an important responsibility for communications, both before the program begins to get workers involved, and afterward, to keep generating new interest and to check on the progress and satisfaction of the workers already enrolled. These responsibilities can be delegated to an in-house liaison or an advisory committee; designating strong individuals to fill those roles increases the number of persons who care about the program and in that way improves its chances of success.

Other actors in the workplace can be important: a union steward can make sure that workers and managers are communicating well about the program and that problems are ironed out before they become serious. Supervisors can contribute their own perspectives about what the company or a particular worker need. They can also look for positive signs of improved performance and be ready with a positive word of encouragement, and they can let others know about improvements they see that might be attributable to the program.

THE ROLE OF SERVICE PROVIDERS

The role of the provider is critical to expanding workplace education efforts within the small business community. As noted above, small employers often lack familiarity with the concept and associated benefits of workplace education. Additionally, most lack in-house expertise and the time to establish programs independently. Workplace education specialists have an important role to play in breaking down these barriers by increasing awareness at the local level and providing technical assistance to employers interested in establishing programs. What follows is

a discussion of these roles and a description of the types of organizations serving this function.

Organizations Involved in Providing Services and Outreach

Currently, several types of organizations are providing services in program design, implementation and instruction. Local school district adult education divisions, community and technical colleges, economic development agencies, volunteer literacy programs, non-profit educational providers, and private consultants provide a variety of workplace education services. Some organizations provide comprehensive services from program development through instruction, follow-up and evaluation. Other organizations offer some services directly and act as the broker for others, or merely provide selected services. Instruction is the service most commonly offered independently of other services.

Most organizations which provide adult education services or work force training programs have begun to consider establishing workplace education services. However, only a very few -- particularly those that exclusively serve rural areas where nearly all businesses are small -- have been successful in reaching the small business community. Many providers receive public funds to operate on-site workplace education programs, whether through state- or federally-funded pilot programs or through mainstream funding mechanisms for education and training. Given the need the typical small business has for a subsidy in order to start or operate a workplace education program, it is logical that they should benefit from this public funding and that service providers should play a key role in helping them.

Outreach and Marketing

Several providers indicated that their first 12 to 18 months of operation demanded a substantial investment of time in community outreach and marketing.

Typical outreach and marketing strategies include presentations to business and professional organizations, mailings, setting up round tables through local chambers of commerce, and direct contact. In South Carolina, for instance, providers had to begin a new program, but they soon became known in the community as they worked with businesses to establish successful workplace education programs. Employers then began calling providers to request assistance, and the need for extensive marketing efforts diminished.

Respondents reported that many employers appreciate the concept of workplace education, but do not see it as a high priority within their own companies. It is therefore incumbent upon the workplace education specialist to show links such as the following between education programs and business survival:

- The cost of hiring new employees and getting them established will become prohibitive, if we believe projections from recent reports. Training current employees is quite cost-effective by comparison.
- Employees receiving education may qualify for higher-paying positions within the company and may thus be prevented from leaving to find a better job.
- American companies can no longer compete with third world countries in assembly line manufacturing. We must shift to a knowledge-based economy to maintain our standard of living.
- Better quality control is becoming a requirement for doing business; that alone is a reason to provide training and education to workers.
- Even local and regional competition will increasingly demand customized goods and services on an instant-demand basis, which requires not only

complex production and inventory procedures, but a flexible and highly-trained workforce.

While many articles and reports provide material that service providers can use to support their campaigns, the majority of small business executives are not easy to convince.

Technical Assistance

All case study sites received technical assistance to develop and implement their workplace education programs. These services generally include program design, needs assessment, marketing to employees, identifying sources of financial assistance, instruction, follow-up, and evaluation. Some providers have in-house instructors to teach classes. Others serve as brokers helping employers find appropriate instructors within the community. The provider is in a prime position to identify sound educational practices including frequency and duration of classes, methodology, and curriculum content.

The specialist can help the employer develop a structure within which to design and implement an effective program. Respondents reported that creating a specific systems designed to promote communication, such as an in-house liaison, is important for gaining input from and sharing information with all levels of the work force. One work force specialist views her role within such a system as that of an advocate for clearer communication. Meeting separately with management, department heads and employee representatives, she serves as an interpreter of the different perspectives. Additionally, she works to create other ways of increasing communication among these groups without the need for her mediation. She described an instance in which her technical assistance produced concrete results. A manufacturing company had experienced a dramatic reduction in the reject rate of one component, because the engineer told production workers how the component was going to be used and therefore

why it had to be flush in one dimension. This specialist said she hopes that efforts to improve communication will increase mutual understanding and encourage people to change old habits which adversely affect business operations.

GOVERNMENT ROLES

One universal feature of the workplace education programs visited during this study was the presence or influence of government action at some level. Most often that influence was indirect; it was the funding provided by government to support the operation of a service provider who in turn was helping small businesses start and operate programs. Help came from a variety of different types of agencies: education, employment and training, economic development, and special-purpose free-standing agencies. We found involvement of all levels of government. Some examples are described below.

Federal Roles

In the site visits conducted for this study, we encountered only one instance of direct federal involvement in workplace education programs in small business. One service provider, the recipient of a Department of Education Workplace Literacy grant, had joined with the local Small Business Development Center and specifically geared its program to working with small business. In that site, federal funding was used directly to hire staff with expertise in adult literacy, business, and ESL. They provided direct help to businesses and train other providers as well. The funding was central to the provider's ability to market the program to local business and to fund the start-up of particular programs.

Interview respondents cited leadership as the most needed indirect federal role. Policy guidance and/or regulatory authority are necessary to encourage more widespread initiation of workplace education programs. This leadership can take several forms:

- Disseminating information designed to increase employer awareness of the benefits of the workplace education programs both to them and their workers;
- Developing and funding training programs for public and private service professionals in the human resources field, and thus increasing the available supply of expertise in the planning, conduct, and oversight of workplace education programs;
- Using existing channels to transfer similar expertise to small businesses and specialists in small business management (e.g., the SBA's management assistance and Small Business Development Center programs);
- Conducting further research to document the benefits and costs of workplace education programs and to determine the relative effectiveness of different program strategies; and
- Supporting legislation and appropriations to assist in the actual operation of programs.

State Roles

In nearly all the programs we visited, state governments have played an active and important role in the development of workplace education programs. We learned of state involvement in several other programs from existing written materials, mailed responses to our request for information to state liaisons, and telephone contacts. Some examples of state programs that appeared promising for small business programs are listed below.

- In Florida, the 1987 Private Sector Education Partner Act created the office of Business and Citizen Participation within the Department of Education. Local education agencies have a mandate to develop workplace programs.
- Illinois has a matching grant program which distributed approximately \$118,000 in 1990 to 16 businesses, including some small firms.
- Maine's Literacy Coalition has a Committee on Workforce Literacy which assists companies in developing classes to be operated through the local adult education system.
- Massachusetts began its Workplace Education Initiative in 1986. This program is a coalition of four state-level agencies and makes direct grants to businesses over a three-year period.
- Mississippi gives a tax credit covering 25% of a company's expenditures for instruction fees, materials, and facilities.
- New Jersey, after participating in a federally-funded partnerships program, introduced legislation to establish a state-funded matching grant program for workplace education.
- In 1987, New York created a \$2 million-per-year program of grants to labor unions (or consortia which include labor unions and employers) for workplace education programs.
- North Carolina develops and subsidizes worker education programs through the Community College system, with over 300 companies participating.

- Pennsylvania's Workplace Technical Assistance Program (WorkTAP) trains providers and offers technical assistance to business in setting up programs.
- The South Carolina Governor's Initiative for Workforce Excellence has set up county-level business roundtables to foster interest in worker education programs. Workforce Specialists located at 16 technical colleges help companies to set up programs and arrange for instructors through local sources, including adult education.
- Virginia has established a statewide network of Employee Development Directors in community colleges who act in a brokering capacity to help companies use local resources to operate programs.

Local Roles

Local government entities involved in workplace education included school districts, community college districts, individual colleges or schools, and cities or counties in their capacity as administrative entities for Job Training Partnership Act-funded programs and other training and support programs. The role of local government agencies proved to be particularly important in states where no strong statewide program existed to provide momentum and expertise to workplace education efforts. A few examples of local support for workplace education programs observed during this study follow.

- A community college made its learning center and tutoring services (including computer-assisted instruction tools) available to workers who needed or wanted extra help.

- A city's JTPA program provided office space and equipment to an adult learning program whose coordinator set up workplace education programs and also operated a learning lab to which companies could refer individual workers for help;
- A college in a rural community provided instructors on-site to companies, as long as average attendance was sufficient to meet the Adult Basic Education formula requirement.

Importance of Government Roles

Interviews with employers indicate that the most crucial of these government-sponsored activities is helping get programs started. Of the 18 workplace education programs visited, and the many others described in telephone interviews, not a single one would -- with certainty -- have been started in the absence of the help and encouragement given by government-funded service providers. Even those employers who are now the program's most enthusiastic advocates acknowledge that either (1) the program was initially introduced to them by a service provider, or (2) upon becoming aware of a need, their first move was to seek out the expertise and financial support that a service provider could provide. Seeking such help is in many ways entirely appropriate, given that the business is providing general training that will help the worker if the worker changes jobs.

At least half of the employers we interviewed stated that, given what they now know about the benefits of the program, they would continue it even in the absence of public support. The experience in Massachusetts will soon test some companies' willingness to back up such claims with action. The Massachusetts program, now in its fourth year, stipulates that companies must assume all the costs of instructional time and materials for their workplace education programs after three years of support from state

grants. Several companies will now be expected to continue their on-site classes without further grant support.

Still, we believe that the most pressing small business need to be met through the intervention of government is for money to plan and start programs. Although cost can be a barrier to participation for businesses of all sizes, the barrier is far more difficult to overcome for small businesses than larger ones. In large companies, human resource departments have their own separate budgets, protected from competing priorities. In small companies, human resource decisions are often made by the same individuals who make capital acquisition and marketing decisions, with the result that different kinds of priorities compete with worker training and education for the same budget dollars. As a result, the small firm's commitment may be vulnerable and unstable over time.

Although the effects of these varying types of government support are sometimes indirect, they are also cumulative. Combined with the service providers' efforts and employers' increased awareness of program benefits, the supportive role of government can make an enormous difference in small companies' ability to undertake workplace education. In that way, policy makers can take an important step in assuring that U. S. business remains competitive in world markets.

VI. CONCLUDING OBSERVATIONS AND RECOMMENDATIONS

If you treat 'em like people, it ultimately pays off.

This quote concisely states the primary lesson that small business employers learned from operating their workplace education programs. In fact, counter to the expectations with which we began the study, many of our observations during the study were related to this lesson -- that the benefits to employers of workplace education may be indirect, but managers believe that they are real. This chapter contrasts our early expectations about the implementation, operations, and outcomes of workplace education programs with what we actually found during the course of the study. It ends with a summary of some of the recommendations offered in earlier chapters.

OBSERVATIONS

Expectation: For small businesses, the threat of employee turnover is a potential barrier to the operation of workplace education programs. They don't want to be in the position of training workers for careers in big business.

Observation: Many employers we interviewed did not appear to be particularly concerned about employee turnover. They tended to see worker education as preparing employees to take on more responsibility within the company, to become more promotable, or to become more flexible and able to take on new assignments. That improved capability represents a clear-cut benefit to the company as well as the worker. However, employers also recognized an equal probability that the worker's education and training will prepare him or her to make a job change, and that change will certainly represent a loss to the employer. Nonetheless, they felt that in the intervening months or years before leaving the company, the employee would give more to the job, care more about the job, and be more engaged in his or her work than ever before. The

challenge then is to maximize the payoff period by making good use of those new skills and rewarding the worker with salary increases, recognition for accomplishments, and a positive work environment.

Expectation: The costs of operating workplace education programs represent a nearly insurmountable barrier to the operation of workplace education programs in small business.

Observation: As reported in Chapters III and IV above, cost does constitute a formidable barrier to starting new programs, as does the lack of expertise and the shortage of management time for planning. However, several companies reported that the costs of ongoing operation can be manageable, and that they would be willing to cover those costs. In fact, four of the programs we visited have never received a cash subsidy to cover ongoing operating expenses, such as the cost of materials and the instructor's time. One of those companies has convinced the local labor union to share the instructional cost; the other three pay the full amount directly. However, none of these programs would have been able to begin operations without the expertise and the initial investment of planning and time made by a publicly-supported service professional. In other words, the more intractable barriers are the time and knowledge needed to start programs.

Expectation: In order to achieve "economies of scale" in operating workplace education programs, small businesses must form consortia or partnerships either in the local community or within an industry group.

Observation: Consortia were more the exception than the rule. While consortia can be effective in organizing and operating workplace education programs, they are easiest to build when based upon solid pre-existing relationships among companies, and

such relationships are relatively rare. It may well be that the cost in management time of building partnerships with other companies where they don't already exist for other purposes is prohibitive. Similarly, service providers who try to develop consortia may find companies somewhat reluctant to cooperate with companies who may also be their competitors -- whether or not they openly admit their reluctance.

Expectation: Classes with job-specific content will be perceived by workers as the most relevant and will yield the best results as measured by academic progress and improved job performance.

Observation: The courses employers are offering typically have little or no job-specific content, though they often contain work-related examples or reading materials. In fact, one employer told us that a course with too much job-specific content would not be well received by the workers who would see the course as "being done for us, not for them," when one of the major purposes of the program was to meet the needs of the workers. One personnel manager said that, if the employees wanted "a class in how to apply makeup or shop for clothes" the company would consider presenting it, just because of the payoff in worker morale. Productivity has been shown to have a positive relationship with the workers' level of general education. Employers in our sample would argue that morale has a similar effect, that workers are most productive when they are satisfied, and they are most satisfied when they sense that the employer values them enough to provide the kind of general training and education that principally benefit the worker.

Expectation: Technological change has been a major impetus for workplace education programs.

Observation: Few of the companies we visited had experienced major changes in their production process or technology. Some employers stated that they had originally undertaken workplace education programs in anticipation of changes such as the introduction of a statistical process control system or new equipment. However, such situations were exceptional. More frequently, the initial impetus for the program was described as being an interest in upgrading worker skills. For example, in manufacturing companies, managers felt the pressure to become or remain competitive in world markets, and had read articles and reports linking competitiveness to work force education. Thus, they were ready to be convinced by an outside service provider that they should try establishing a worker education program, particularly if the experiment carried no out-of-pocket cost or risk. Overall, however, the link between technological change and workplace education is weaker than it is often thought to be. In fact, this observation points to a major distinction between workplace education and job-specific training. Job-specific training is almost always needed as part of the adjustment to new technology. The need for workplace education is much more general. In fact, workers who have received workplace education are in a better position than others to benefit from job-specific training, since one of the things they learned is that they have the ability to absorb new information.

Expectation: Today's jobs demand skills that workers do not have.

Observation: This expectation was consistent with some of the media stories and reports circulated over the past several years. It implies major deficiencies in basic skills among the currently-employed population. However, deficient performance in current jobs was not cited by interview respondents as a factor prompting workplace education programs. In fact, even workers with real deficiencies in basic skills have usually found ways to perform their jobs effectively -- such as taking written materials home for someone else to read to them.

Instead, it seems to be tomorrow's jobs posing the challenges that workers need help in meeting. By "tomorrow's jobs" we mean two equally important categories of jobs:

- (1) The jobs that already exist in today's workplace to which a given worker might aspire -- i.e., those jobs next in line in the promotional ladder for which the worker cannot qualify without first acquiring or brushing up on basic skills. In the same category are the "better jobs" working for a different employer that would be unattainable to a worker with basic skills deficiencies.
- (2) The jobs that do not yet exist in the U.S. economy, but which need to be created in tomorrow's workplace in order for a business to prosper and for our economy to grow -- in other words, the knowledge jobs of the future.

Expectation: Small business managers will not invest in anything that does not promise to pay off in measurable terms; thus they will be unlikely to invest in worker education.

Observation: It is indeed exceptional to find a small business owner or manager willing to make an overly-risky investment. However, several of the managers we interviewed are convinced that the workplace education programs they have undertaken represent some of their best and surest investments.

The form in which they hope and expect that the investment will pay off varied among the respondents interviewed. For one manager, it was increased production on a day-to-day basis. For another, it was the increased flexibility of his workers to take on new assignments, so that he did not have to hire a new person at a high salary, but

could promote someone he liked and trusted into an important job. A third manager valued the teamwork between the union and management that the program had helped to foster. Another pointed to lower reject rates from a major customer. Other employers see the changes in their work force in less quantifiable terms -- e.g., improved morale and increased self-confidence -- but nonetheless believe that those are sufficient paybacks to justify the company's investment in workplace education.

RECOMMENDATIONS

As suggested in earlier chapters, several steps can be taken to help generate more -- and more successful -- workplace education programs in small business.

- (1) We need to develop training which will increase awareness among educators and service professionals about the needs and constraints that small business managers confront, such as a lack of suitable space to set up a classroom, or an inability to "fill in" for workers during classes. Increased collaboration between educators/service professionals and the staff of Small Business Development Centers could serve as an avenue for useful sharing of knowledge.
- (2) Where someone has found solutions to some of the "typical" small business barriers to implementing workplace education programs, we need to have easily-available ways of finding out about them and spreading the word. A system modeled on the Job Accommodation Network, set up by the President's Committee for Employment of Persons with Disabilities, might be effective. That Network consists of an 800 number and staff who take calls from employers who have useful accommodation experiences to share and who pass along those employers' telephone numbers to other employers who have problems in which the

circumstances and needs are the same. In addition, increased use of publications such as the BCEL Newsletter might be useful.

- (3) Another need is to encourage service providers to make workplace education affordable by establishing "sliding scale" fee structures that favor small businesses. It may be that state or federal subsidies are needed to make such a suggestion feasible, or it may be that consultants can charge high enough rates to larger clients to cover the shortfall created when they serve small ones.
- (4) Support for and passage of legislation which reinforces the importance of workplace education will be an important step. Rather than taking issue with specific provisions in the differing versions of the literacy bill, proponents of action might consider that some legislation, even if imperfect, is needed as a start, and that later fine-tuning is still a possibility.
- (5) Any actions we can take to add to our knowledge about effective practices will be helpful. Such actions might include research that looks systematically at the outcomes of alternative types of programs. Other possibilities include making it possible (by providing honoraria and expenses) for more small business representatives to attend conferences and workshops in order to share their successful experiences and techniques and learn from those of other companies. Some states have contributed this type of involvement with great success; what they have sometimes been unable to do is to produce a document along with (or after) such conferences, which can in turn be distributed to wider audiences.

- (6) The most important types of contribution to be made fall under the heading of funding. Funding seems appropriate as a specific focus of federal responsibility, since some of the benefits of workplace education accrue not to the employer providing it, but to workers and the economy as a whole. Specific suggestions about funding may take many forms, such as:

- a tax credit;
- a targeted payroll tax;
- increased use of demonstration program funding -- and larger amounts of such funding -- to emphasize small business programs;
- a revolving loan fund to cover start-up costs; and
- matching grants designed in such a way that they shape the incentives of foundations and other sources of private funds to increase their commitment to workplace education programs.

- (7) Agencies that administer existing funding -- or who write regulations governing that funding -- for job training, adult basic education, vocational education, and ESL should look specifically at the issue of workplace education. Specific attention should be paid to those areas of shared and overlapping goals, what constitute allowable activities under specific titles and subtitles of existing legislation, and how related regulations might change to alleviate gaps in the current system for enhancing the skills of our current and future workforce.

APPENDIX A

PROFILES OF SMALL BUSINESS EFFORTS
IN WORKPLACE EDUCATION

PROJECT PROFILE

SMALL BUSINESS EFFORTS IN WORKPLACE EDUCATION

PROJECT IDENTIFICATION

Project Name

Franvale Nursing Home
20 Pond Street
Braintree, MA

Project Consultant

Continuing Education Institute, 163 Highland Avenue, Needham, MA 02194

Contact Persons

Chris Taylor, Staff Development Nurse, Franvale Nursing Home,
617-848-1616

Lloyd David, Continuing Education Institute, 617-449-4802

Type of Business

Nursing Home

This is a single site operation with a total of 115 employees

SPECIAL FEATURES

The Continuing Education Institute (CEI) negotiated a grant through the Massachusetts Workplace Education program to cover program development and instructional costs. Working with Franvale and a neighboring nursing home -- also with fewer than 150 employees -- CEI was able to establish sufficient interest to implement beginning and intermediate English as a Second Language classes.

As a grant recipient, the program is required to form an advisory board consisting of a staff liaison from each of the participating businesses, a representative from the educational provider's organization and representatives of local organizations concerned with long-term care. Following evaluations of the initial grantees, the State now recommends the addition of a program participant to the advisory board.

The normal term of a Massachusetts Workplace Education grant is three years. Each year the grantee is expected to cover an increasing share of the program costs. By the fourth year the program is expected to run without the assistance of public funds.

FUNDING SOURCES

Public Funds

Program development and instructional costs.

Private Funds and In-Kind Donations

Participants receive release time for 50% of class hours. A company staff person serves as liaison between the business and the provider, and sits on the program's advisory board. Additionally the company provides meeting space for the class.

PROJECT DESCRIPTION

Overall Objectives

To increase the English communication skills of employees for whom English is a second language.

Services/Training Delivered

- **description**

Beginning and intermediate ESL classes

- **timing, duration, frequency**

Three modules of ten weeks are offered over the course of the year. Classes meet twice a week for two hours per meeting.

- **location**

The intermediate ESL class is held on-site. The beginning ESL class is held at the neighboring nursing home participating in the program.

- **intended outcomes; definition of completion, success**

The nursing home does not conduct any formal evaluation. The educational provider's evaluation -- for its own use -- consists of written comments by teachers, participants and supervisors as well as scaled tests developed by the provider.

- **routes of participant entry into program**

Participation is voluntary. The Staff Development Nurse individually spoke with employees she felt would benefit from the program.

Recipients of Services/Training

- **number of participants**

The program has 24 participants in total -- 12 from each of the two participating nursing homes.

- **occupation of participants**

Nursing assistants, laundry assistants, and dietary assistants.

Deliverers of Services/Training

The Continuing Education Institute is a non-profit educational provider. CEI assisted with program development and provides instructors.

PROJECT HISTORY AND OPERATION

Origin

The program was started prior to the current administrator's tenure.

Future Plans

Following a summer break, the company plans to continue classes this fall.

ADVICE TO OTHERS CONSIDERING OR PLANNING A SIMILAR PROGRAM

Reinforcement and encouragement are very important. Be sure that staff who are native-speakers of English are supportive of the program.

PROJECT PROFILE

SMALL BUSINESS EFFORTS IN WORKPLACE EDUCATION

PROJECT IDENTIFICATION

Project Name

Armenian Nursing Home
431 Pond Street
Jamaica Plains, MA 02130

Project Consultant

Continuing Education Institute, 163 Highland Avenue, Needham, MA 02194

Contact Persons

Ira Lipshutz, Administrator, Armenian Nursing Home, 617-522-2600

Lloyd David, Director, Continuing Education Institute, 617-449-4802

Type of Business

Nursing home
This is a single site operation with 75 employees

SPECIAL FEATURES

The Continuing Education Institute (CEI) negotiated a grant through the U.S. Department of Education to establish a consortium of three long-term care providers, including the Armenian Nursing Home, that were interested in offering workplace educational programs to staff members.

FUNDING SOURCES

Public Funds

The grant covered the costs of program development and instructional fees for classes in English as a Second Language (ESL), Adult Basic Education (ABE) and the Adult Diploma Program (ADP).

Private Funds and In-Kind Donations

ESL and ABE participants received release time for 50% of class hours. The company also provided meeting space for these classes. The Adult Diploma Program was offered after regularly scheduled working hours. The Licensed Practical Nurse Certificate Program was a full-time program. The company guaranteed participants 16 hours of work per week, full health benefits and a \$500 scholarship.

PROJECT DESCRIPTION

Overall Objectives

To attract and retain staff, to increase English communication skills of employees for whom English is a second language, to provide a career development stepping stone for employees, and to provide a positive tone in the workplace.

Services/Training Delivered

- description

English as a Second Language (ESL)
Adult Basic Education (ABE)
Adult Diploma Program (ADP)
Licensed Practical Nurse (LPN) Certificate Program

- timing, duration, frequency

LPN Program: A full-time intensive program lasting one year.

ESL/ABE/ADP: Three modules of ten weeks are offered over the course of a year. Classes meet twice a week for two hours per meeting.

- location

ESL and ABE classes were held on-site. The ADP program was held on the site of another consortium member, transportation was provided. The LPN program was held at a local community college.

- intended outcomes; definition of completion, success

The nursing home does not conduct any formal evaluations. The educational provider's evaluation -- for its own use -- consists of written comments by teachers, participants and supervisors as well as scaled tests developed by the provider.

- routes of participant entry into program

Participation is voluntary. Notices announcing the classes were posted on the personnel board; group meetings were held to discuss the program; and an effort was made to reach out to specific individuals. CEI held individual interviews and conducted assessments of interested workers to determine areas of interest and need.

Recipients of Services/Training

- number of participants**

Seventeen employees of the Armenian Nursing Home were participating at the programs peak.

- occupation of participants**

Primarily nursing assistants, dietary assistants and janitors.

Deliverers of Services/Training

The Continuing Education Institute assisted with program development and provided the instruction for the ESL, ABE and ADP classes. The LPN program was offered through a local community college.

PROJECT HISTORY AND OPERATION

Origin

The administrator learned of the program offered by CEI through a professional newsletter.

Future Plans

The program is no longer receiving public funds. The Armenian Nursing Home and one of the other consortium members are currently discussing the possibility of continuing the ESL class on-site. The nursing home is also considering the implementation of a tuition reimbursement program.

ADVICE TO OTHERS CONSIDERING OR PLANNING A SIMILAR PROGRAM

A successful program demands a lot of effort. You can't just offer it and think the work is done. It must be continually promoted among staff.

PROJECT PROFILE

SMALL BUSINESS EFFORTS IN WORKPLACE EDUCATION

PROJECT IDENTIFICATION

Project Name

Span America Medical Systems, Inc.
P.O. Box 5231
Greenville, South Carolina 29606

Project Consultant

South Carolina Governor's Initiative for Work Force Excellence

Contact Person

Melinda Gage, Personnel Manager, Span America, 803-288-8877

Type of Business

Manufacturer of foam rubber products and flexible packaging
This is a two site operation with a total of 225 employees

SPECIAL FEATURES

This program was established with the assistance of the South Carolina Governor's Initiative, a statewide effort to assist business in the implementation of Workplace Education programs. The Initiative staff includes 16 Work Force Specialists located at the State's Technical Colleges. Work Force Specialists work closely with local education providers and businesses to develop and implement workplace education programs. A system of regional business round tables has been established to serve as advisory boards to local Work Force Specialists.

FUNDING SOURCES

Public Funds

Program development assistance and instructional costs.

Private Funds and In-Kind Donations

Participants are paid for class time. One hour of class is offered on paid release time. The other hour of class is held outside of normal working hours. In the event of overtime demands, participants attend class and then return to work. The company also provides meeting space on-site and purchased books.

In addition to the on-site workplace education program, the company also has a tuition reimbursement plan available to all full-time employees.

PROJECT DESCRIPTION

Overall Objectives

To provide employees with the opportunity to upgrade their skills. The firm is looking at the big picture and does not expect to see quantifiable returns in the near future, but does expect to see gains in morale. The company initiated the program in the belief that if the workplace does not provide employees with the opportunity to upgrade their skills, the U.S. will be unable to compete in the global market.

Services/Training Delivered

- description

Self-paced Math
Self-paced GED Preparation
Language Arts

- timing, duration, frequency

All classes meet twice a week, two hours per meeting. The GED class is ongoing. To date, other classes have been scheduled to meet for a 12 week period.

- location

Classes are held on-site in the break room.

- intended outcomes; definition of completion, success

The goal of the math class was to complete high school level math; the goal of the GED class is to pass the GED test; and the goal of the language arts class is to improve speaking and writing skills.

- routes of participant entry into program

Group meetings were held to introduce the program. The program presentation included remarks by Mr. J.T. Pace, a literacy spokesperson who learned to read at the age of 60, Charlie Mitchell, Span America's President, and Jim Schemp, the Work Force Specialist. Voluntary sign-up followed. Melinda Gage, Span America's Personnel Manager, relying on strong interpersonal relationships with employees, then spoke with each employee individually to explain the educational opportunity, answer questions, and encourage participation. She continues to touch base with participants throughout the program and again speaks with all employees individually prior to beginning a new class.

Recipients of Services/Training

- **number of participants**

Approximately 60 employees have participated over the course of the program.

- **occupation of participants**

Production Workers

Deliverers of Services/Training

The Initiative Work Force Specialist, the Board of Education Division of Adult Education, and Greenville Technical College.

PROJECT HISTORY AND OPERATION

Origin

The President and Personnel Manager had been discussing the importance of workplace education shortly before they were contacted by a South Carolina Work Force Specialist. They may or may not have implemented a program without the Initiative, but the Initiative propelled them forward. The Initiative's offer to cover instructional costs took away any possible opposition the company may have had.

Future Plans

The program is viewed as an ongoing effort. Future offerings under consideration include classes on budgeting and finances, practical problem solving, reasoning, creative thinking, and self esteem.

ADVICE TO OTHERS CONSIDERING OR PLANNING A SIMILAR PROGRAM

Don't be afraid of offering to do it. Don't hold back. Don't look for bottom line results. What it does for the people all comes back into the company. You can never measure it, but you'll see it in quality, morale, and ethics. The trick is to take away all the barriers. Think of all the reasons it won't work and then knock down those barriers.

Paying participants for their time is pivotal in reducing resistance. If you say you'll do it, but you won't pay, it won't work. It really doesn't cost that much. If business took a down swing, I can think of a lot of things I would cut back on before I would cut back on this program.

PROJECT PROFILE

SMALL BUSINESS EFFORTS IN WORKPLACE EDUCATION

PROJECT IDENTIFICATION

Project Name

The Loxcreen Company
P.O. Box 4004
West Columbia, South Carolina 29171

Project Consultant

South Carolina Governor's Initiative for Work Force Excellence

Contact Persons

Phil Hoffman, Personnel Manager, The Loxcreen Company,
803-822-8200

Sam Dees, Work Force Specialist, Midlands Technical College, P.O. Box
2408, Columbia, S.C. 29202, 803-732-5206

Type of Business

Screen door manufacturer
137 employees on-site

SPECIAL FEATURES

This program was established with the assistance of the South Carolina Governor's Initiative, a statewide effort to assist business in the implementation of Workplace Education programs. The Initiative staff includes 16 Work Force Specialists located at the State's Technical Colleges. Work Force Specialists work closely with local education providers and businesses to develop and implement workplace education programs. A system of regional business round tables has been established to serve as advisory boards to local Work Force Specialists.

FUNDING SOURCES

Public Funds

Program development, introduction, assessment and instructional fees.

Private Funds and In-Kind Donations

Program introduction and participant assessment take place on-site during regularly scheduled working hours. Participants are paid for 50% of their class time. The company also provided space, on-site, for the first two course sessions offered.

Currently classes are being offered at the Adult Education Center. Participants receive a half hour paid release time to cover transportation time to the Center.

PROJECT DESCRIPTION**Overall Objectives**

To assist employees in furthering their educational goals. Ultimately the company wants to ensure flexibility within the work force to prepare generally for anticipated technological changes.

Services/Training Delivered**- description**

Two sessions of ABE and GED Preparation have been completed.

Currently, employees are eligible to participate in the Workplace Education program at the Adult Education Center. Program participants come from a variety of firms throughout the area. Instructional costs are paid for through a grant from the State Department of Education, Division of Adult Education. Course offerings include: ABE, GED Preparation, Reading Tutorials, Commercial Driver's License Preparation, PALS Lab, Introduction to Computers, and Word Processing. Classes are self-paced.

- timing, duration, frequency

Time-limited program: On-site classes met four hours per week for eight weeks. Classes were held in two hour sessions immediately after the normally scheduled work day.

Ongoing program: The Workplace Education Program at the Adult Education Center is open daily from 4:00 p.m. to 6:00 p.m. The program is ongoing.

- location

Time-limited program: On-site.

Ongoing program: At the local Adult Education Center.

- intended outcomes; definition of completion, success

Based on goals developed by individual participants.

- routes of participant entry into program

Participation is voluntary. The Work Force Specialist holds orientation meetings to present the program and invite employees to sign up for an assessment test. The test is used to determine if there are enough people with similar needs to comprise a class and to advise individuals about the appropriateness of the class to their needs.*

Recipients of Services/Training

- number of participants

Thirty-six employees participated in the on-site classes. Five employees have participated in the Adult Education Center program.

- occupation of participants

Production Workers.

Deliverers of Services/Training

The Initiative Work Force Specialist and the Lexington 2 Division of Adult Education.

PROJECT HISTORY AND OPERATION

Origin

The personnel manager began hearing about the importance of workplace education programs several years ago through the American Society of Personnel Managers. Specific motivation for program implementation was provided by a personal visit from the Initiative's Work Force Specialist.

Changes Over Time

After the first two sessions the program was moved off-site. While the employer does provide off-site participants a half hour paid release time, the company views participation as something the employees are doing on their own.

Future Plans

The employer hopes to implement another on-site program.

*A minimum of ten people per class is necessary to qualify for Adult Education funds to cover instructional costs.

ADVICE TO OTHERS CONSIDERING OR PLANNING A SIMILAR PROGRAM

There will be more interest in the program if it is held on-site. Don't feel like you won't have enough interest. Holding the class during regularly scheduled working hours or providing compensation for class time outside of normal working hours provides a good incentive to participate. It's a great way to do something for employees. We've gotten more mileage out of this program than anything we've done in the last eight years.

PROJECT PROFILE

SMALL BUSINESS EFFORTS IN WORKPLACE EDUCATION

PROJECT IDENTIFICATION

Project Name

Johnson Controls, Inc.
10109 Two Notch Road
Columbia, South Carolina 29923

Project Consultant

South Carolina Governor's Initiative for Work Force Excellence

Contact Persons

Sam Elliott, Personnel Manager, Johnson Controls, 803-788-2000

Sam Dees, Work Force Specialist, Midlands Technical College, P.O. Box 2408, Columbia, S.C. 29202, 803-732-5235

Type of Business

Plastic bottle manufacturer
This is a single site operation with 107 employees

SPECIAL FEATURES

This program was established with the assistance of the South Carolina Governor's Initiative, a statewide effort to assist business in the implementation of Workplace Education programs. The Initiative staff includes 16 Work Force Specialists located at the State's Technical Colleges. Work Force Specialists work closely with local education providers and businesses to develop and implement workplace education programs. A system of regional business round tables has been established to serve as advisory boards to local Work Force Specialists.

FUNDING SOURCES

Public Funds

Development, introduction, assessment, instructional costs.

Private Funds and In-Kind Donations

Participants are paid for class time. The company also provides meeting space.

PROJECT DESCRIPTION

Overall Objectives

The company's primary goal is to provide an opportunity for interested employees to refresh their reading, writing and math skills. In the long run, the company hopes that the program will increase opportunities for internal promotion.

Services/Training Delivered

- **description**

The program began with a multi-level, self-paced math class. This course has been completed. The company is in the initial stages of setting up a second series of classes. This series is expected to include English and math.

- **timing, duration, frequency**

The math class met three hours per week for six weeks. Classes were held from 6:30 to 8:00 a.m., prior to the normal work day.

- **location**

On-site

- **intended outcomes; definition of completion, success**

Individually determined by participants.

- **routes of participant entry into program**

Participation is voluntary. The Work Force specialist holds orientation meetings to present the program and invite employees to sign up for an assessment test. The test is used to determine if there are enough people with similar needs to comprise a class and to advise individuals about the appropriateness of the class to their needs."

Recipients of Services/Training

- **number of participants**

Thirteen people participated in the math class.

- **occupation of participants**

Office workers and plant personnel.

Deliverers of Services/Training

The Initiative Work Force Specialist and a local education provider.

*A minimum of ten people per class is necessary to qualify for Adult Education funds to cover instructional costs.

PROJECT HISTORY AND OPERATION

Origin

The company became interested in implementing a workplace education program when contacted by the Work Force Specialist.

Changes Over Time

While the company probably would not have implemented the program without technical and financial assistance from the state, they would now consider covering the costs to run the program.

Future Plans

The company and the Work Force Specialist are in the initial phases of implementing a new class which will likely include math and English.

ADVICE TO OTHERS CONSIDERING OR PLANNING A SIMILAR PROGRAM

Take advantage of all the help you can from public programs -- development, introduction, testing, materials, etc. Rely on the services of the education professionals to introduce the program to potential participants. Introductory meetings should be held during regularly scheduled working hours and all employees should be requested to attend.

Survey employees about their interests to determine course offerings. Participation should be voluntary, but once the program gets going, it may be useful to approach those who are more reluctant and encourage their participation.

PROJECT PROFILE

SMALL BUSINESS EFFORTS IN WORKPLACE EDUCATION

PROJECT IDENTIFICATION

Project Name

Alcas Corporation
1116 East State Street
Olean, New York 14760

Project Consultant

Allegany County Employment and Training Center, 7 Wells Lane, Belmont,
New York 14813

Contact Persons

John Stevens, Manager of Training and Employee Development, Alcas
Corporation, 716-372-6145

Carol Cash, Program Coordinator, Allegany County Employment and Training
Center, 716-268-9240

Type of Business

Manufacturer of household cutlery

This is a single site operation with 370 employees at the manufacturing site.
With the inclusion of permanent national sales staff, the total number of
employees reaches approximately 400.

SPECIAL FEATURES

The workplace education program is partially funded through a grant to the Cattaraugus/Allegany Central Labor Council from the New York Department of Education, Bureau of Economic and Work Force Development. In 1987, New York State passed legislation to fund labor unions and consortia combining labor unions and employers to establish workplace education programs. This grant program, administered by the New York Department of Education, has been funded at approximately two million dollars per year since initial passage. As a grantee of this program, the Cattaraugus/Allegany Central Labor Council has established a partnership with the Allegany County Employment and Training Center, Jamestown Community College and three local businesses to develop and implement on-site workplace education programs.

FUNDING SOURCES

Public Funds

The New York Department of Education, Bureau of Economic and Work Force Development granted funds to cover program development, instructional costs, materials and supplies for classes in reading and math, and in computer basics jointly sponsored by the union and the company.

Private Funds and In-Kind Donations

Participants in the jointly-sponsored reading and math class received 50% release time for class hours attended. The problem solving class was required of all members of the self-managing work team, and was held during regularly scheduled working hours.

Additionally, the company has a tuition reimbursement plan available to all employees.

PROJECT DESCRIPTION

Overall Objectives

To offer employees the opportunity to improve math and reading skills related to their jobs or their personal lives. The company views this as general preparation for future implementation of new technologies.

In one department, the company is also piloting a new structural model based on a self-managing work team. The intent of this program is to increase participation of individual workers in the production process, through self-management.

Services/Training Delivered

- description

Classes jointly sponsored by the union and the company:

Self-paced reading and math. This was a voluntary class offered on-site. Each participant chose whether to work on reading or math. Most chose math.

Referrals to volunteer reading tutors. At the request of employees, these referrals were made confidentially, and tutoring took place off-site and outside of regularly scheduled work hours.

Introduction to computers.

Company-sponsored classes:

Problem solving. This course was required of all members of the recently created self-managing work team. The class took place on-site during regularly scheduled work hours.

- timing, duration, frequency

Classes jointly sponsored by the union and the company:

The on-site reading and math class met twice a week, two hours per meeting for 12 weeks. One hour of class is offered on paid release time. The other hour is held outside normal working hours.

Individual reading tutorials are ongoing, and are held outside of work hours.

Introduction to computers met twice a week, two hours per meeting for three weeks. The class met after usual work hours.

Company-sponsored classes:

The problem solving class met once a week for ten weeks.

- location

Introduction to computers was held at Jamestown Community College. All other classes were held on-site.

- intended outcomes; definition of completion, success

Classes sponsored jointly by the union and the company:

Goals were individually determined by participants.

Company-sponsored class:

Completion of the problem solving classes was based on attendance.

- routes of participant entry into program

Classes sponsored jointly by the union and the company:

The program is voluntary. It was initially introduced by the program consultant and union representatives at a general union meeting. Following this, the Alcas Manager of Training and Development, and the Union President met with groups of 25 to 30 employees to describe the program and sign up procedures. Potential participants were given the opportunity to sign up immediately, or to make their interest known privately to their supervisor or to one of the presenters. Several people who felt they did not have the skills to participate in the class came forward privately. These people were assisted in finding reading tutors.

Company-sponsored classes:

The problem solving class was required of all members of the self-managing work team.

Recipients of Services/Training

- number of participants

Classes sponsored jointly by the union and the company:

The on-site reading/math class was limited to twelve people at the request of the provider. Three or four people were referred to reading tutors. Ten people participated in the computer class.

Company-sponsored classes:

Sixteen people participated in the problem solving class.

- occupation of participants

Primarily production workers

Deliverers of Services/Training

Allegany County Employment and Training Center assisted in program development and monitoring. The computer class was taught by Jamestown Community College. The reading and math class was taught by the New York State Board of Cooperative Education Services. Reading tutorials were conducted by local literacy volunteers, and the problem solving class was taught by the company's Manager of Training and Development.

PROJECT HISTORY AND OPERATION

Origin

The union approached the company about the possibility of implementing workplace reading, computer, and math classes. The problem solving class was implemented in support of the experimental self-managing team.

Future Plans

In anticipation of further funding through the Central Labor Council, the company expects to continue with reading and math classes this fall. Courses to support the development of the self-managing production team will also continue. These offerings will include team building -- communications, positive listening -- and statistical processing control (SPC). Implementation of SPC will be left to the discretion of the team.

Additionally, the company plans to begin a 12-hour course this fall which will be required of all employees. This course will discuss the cutlery industry, the company structure, product line, quality marketing strategy and manufacturing process, and the roles of individuals within this process. The object of this class is to develop a common language among all staff, to facilitate job transfer by providing employees with information about other jobs, to reduce absenteeism, to reduce turnover, to increase team-building, and to increase self-esteem. Following completion of this course by current employees, it will be used in the orientation of new employees.

Regardless of additional outside funding, the company plans to continue offering classes. However, outside funding will influence the extent and frequency of offerings.

ADVICE TO OTHERS CONSIDERING OR PLANNING A SIMILAR PROGRAM

Start modestly. Success will support program growth. Think about what is required for adult learners. Adults like to decide for themselves what they need to learn and how. They like to work in an environment that is supportive and where they can use what they learn.

In offering classes there are really two choices. You can test everyone, assess their level, and try to bring everyone up to a certain level. Alternatively, you can offer the opportunity to improve skills, acknowledging that potential participants know what they can and cannot do and what additional skills are valuable to them. The second option will lead to good results. You can't force things on people. People like to learn by doing, not by listening. Then, they want to be able to apply what they have learned.

PROJECT PROFILE

SMALL BUSINESS EFFORTS IN WORKPLACE LITERACY

PROJECT IDENTIFICATION

Project Name

Medallion Kitchens
180 Industrial Blvd.
Waconia, MN 55387

Project Consultant

Directions, 4900 Viking Drive, Suite 105, Edina, MN 55435

Contact Persons

Rob Jacobs, Director of Human Resources, Medallion Kitchens,
612-442-5171

Pat Eliason, Learning Manager, Directions, 612-830-9226

Type of Business

Manufacturer of kitchen cabinets
250 employees on site

SPECIAL FEATURES

Directions is a workplace literacy partnership established in 1989 through a grant provided by the U.S. Department of Education. Program partners include Adult Basic Education Providers, a Small Business Development Center housed at a local Community College, a Technical College, and the County Employment and Training Department.

Directions provides consultation, needs assessment, training and education recommendations, follow-up, and evaluation. Directions links businesses with instructors for on-site programs and refers employees to community programs.

In its first year, Directions established a number of pilot workplace education programs. A substantial portion of program costs were subsidized through the U.S. Department of Education grant. Future programs are expected to pay a larger portion of the costs, particularly those costs associated with instructional fees.

FUNDING SOURCES

Public Funds

Program development and monitoring as well as 60% of the instructional costs.

Private Funds and In-Kind Donations

The company provides meeting space and pays 40% of instructional costs.

PROJECT DESCRIPTION

Overall Objectives

To offer employees an opportunity to improve their skills.

Services/Training Delivered

- **description**

English as a Second Language

GED Preparation

Learning Center offering self-paced activities in math and communications skills

- **timing, duration, frequency**

Classes are held after normally scheduled working hours. The ESL and GED classes met one hour per week for 10 weeks. The Learning Center is open four hours per week. Learning Center modules are 10 weeks long.

- **location**

On-site.

- **intended outcomes; definition of completion, success**

Individually based.

- **routes of participant entry into program**

The program is voluntary. In addition to posting notices, and announcing the program at an employee relations meeting, the Director of Human Resources spoke individually with potential participants.

Recipients of Services/Training

- **number of participants**

A total of 32 employees have participated to date.

- occupation

Production workers.

Deliverers of Services/Training

Directions staff provided initial consultations and assisted with program development. Courses are taught by professional educators associated with the Directions partnership who have experience in ESL and Adult Education.

PROJECT HISTORY AND OPERATION

Origin

On beginning employment with the firm, the Director of Human Resources began making regular visits to the shop to introduce himself and to make himself available to employees. Through this process he became aware of the fact that a number of employees spoke very little English. These employees worked through translators, often associating themselves with a bilingual foreman. This relationship limited opportunity for mobility of many of the non-native speakers of English. This led the Director of Human Resources to implement an ESL class which then led to the implementation of additional programs.

Changes Over Time

While the ESL class noticeably increased on the job communication among employees, it was felt that more frequent meetings were necessary to make substantial progress. Future ESL classes will meet for minimum of four hours per week.

Other changes include the establishment of a Learning Center to attempt to accommodate individual needs.

Future Plans

Following a summer break, the company plans to continue with ESL classes and the Learning Lab. The company is also considering offering financial compensation to program participants.

ADVICE TO OTHERS CONSIDERING OR PLANNING A SIMILAR PROGRAM

Do it. Try it. We've gained so much through the implementation of this program. The program is perceived by participants as well as others in the shop as a positive effort on the part of the company which is above and beyond the norm.

Seek the assistance of an agency like Directions. It is difficult for a small company to independently develop and implement a program such as this in the midst of the daily demands of production.

PROJECT PROFILE

SMALL BUSINESS EFFORTS IN WORKPLACE LITERACY

PROJECT IDENTIFICATION

Project Name

Hotel Dieu Hospital
168 Ontario Street
St. Catherines, Ontario

Project Consultant

Ontario Federation of Labor, 9 Salina Street, St. Catherines, Ontario L2R 3K2

Contact Persons

Karen Zanutto, Manager of Personnel Services, Hotel Dieu Hospital, 416-682-6411, ext. 472

Gary Wylie, Site Coordinator, Ontario Federation of Labor, 416-641-5034

Type of Business

Hospital
Approximately 700 full time employees

SPECIAL FEATURES

The BEST program is a workplace education program focusing on English literacy, French literacy, English as a second language (ESL), French as a second language (FSL) and numeracy. The program, currently in its third year, was developed and is administered by the Ontario Federation of Labor (OFL) through an ongoing grant of approximately \$1.25 million per year from the Ontario Ministry of Education.

This is a unique program based on a learner centered model of small group education in which a co-worker serves as facilitator. On identifying need and interest in a workplace education program, a co-worker is chosen to act as group facilitator. Prior to implementing the program, the facilitator participates in a two week intensive training. BEST funds cover the costs of the training, and the facilitators wages, travel, accommodations and child care. The training addresses theories of learner centered adult education and is taught using these same techniques.

Following the initial two week training, facilitators return to the workplace to implement the program. Regional coordinators are available for support as needed. Two additional training sessions are held during the facilitator's first year with the project. Approximately two months after the project is implemented, a second training session of three days is attended by the facilitator. Again, six months into the program an additional two day training is scheduled. Subsequent to the facilitator's first year with the program, one week of training is provided annually.

Study groups of 6 - 10 participants are organized to meet for one year. The program year is broken into three sessions of approximately 12 weeks. The group directs the course of study. Generally goals are established at the beginning of each 12 week session and program evaluations are conducted at the end. The small, informal nature of the program facilitates accommodations throughout the year.

The program is based on the theory that people learn when they want to learn. Facilitation by co-workers provides a common ground for the group as a whole. A shared work life brings a familiarity and group sensitivity to the program which is often difficult to achieve in more traditional educational settings.

FUNDING SOURCES

Public Funds

Program development, facilitator training and on-going support, and materials.

Private Funds and In-Kind Donations

Participants receive 50% release time. The hospital also provides meeting space and photo-copying. Additionally, the hospital has a tuition reimbursement plan for job specific course work.

PROJECT DESCRIPTION

Overall Objectives

The program is viewed as a long term investment to assist employees interested in increasing skills within currently held jobs and to increase the opportunity for promotion. Additionally the implementation of current health and safety requirements are facilitated by employees' increased skills.

Services/Training Delivered

- description

Co-worker facilitated ESL reading and writing group.

- **timing, duration, frequency**

The class meets during an extended lunch break, 4 days per week for one hour per meeting. The group is scheduled to meet for 3 twelve week sessions over the course of the year.

- **location**

On-site.

- **intended outcomes; definition of completion, success**

Program content is determined by each group of approximately 10 participants. Groups meet for one year which is divided into three modules of 12 weeks each. On completing each module, the group evaluates the program and establishes goals for the following period of study. Improved fluency on the job; improved ability to read instructions, safety information, policy, and procedures.

Recipients of Services/Training

- **number of participants**

Eleven employees are participating in the current group.

- **occupation/industry characteristics**

Dietary and housekeeping staff.

Deliverers of Services/Training

The Ontario Federation of labor assists with program development and implementation. Study groups are facilitated by co-workers who have received training through the OFL. Additionally, the OFL provides ongoing support to group facilitators.

PROJECT HISTORY AND OPERATION

Origin

The hospital had been looking at a variety of literacy programs over the last few years. The union's suggestion and ability to implement a program provided an ideal opportunity to establish a program.

Changes Over Time

Class meeting time is expected to change, at the suggestion of participants, from one hour per day, four days a week, meeting at lunch time to two hours per meeting, two days per week, meeting at the beginning or end of the work day. Meeting time will overlap one hour of regularly scheduled work time.

Future Plans

The program is expected to expand in the coming year.

PROJECT PROFILE

SMALL BUSINESS EFFORTS IN WORKPLACE LITERACY

PROJECT IDENTIFICATION

Project Name

CGC Interiors
735 Fourth Line
Oakville, Ontario L6L 5B7

Project Consultant

Halton Board of Education, Workplace Educational Training Program, 2050
Guelph Line, Box 5005, Burlington, Ontario L7R 3Z2

Contact Persons

Mary Jones, Human Resources Representative, CGC Interiors, 416-845-3883

Kathy Mills, Halton Board of Education, Workplace Educational Training
Program, 416-845-7542

Type of Business

Manufacturer of suspended ceiling systems, lighting systems and access
flooring systems
130 employees on site

SPECIAL FEATURES

This program is sponsored by the Halton and Peel Industries Training Advisory Committee (HAPITAC), through a grant from the Ontario Ministry of Education. HAPITAC is a publicly funded networking and support group focused on addressing the education and training needs of local small businesses.

FUNDING SOURCES

Public Funds

Program development and instructional costs.

Private Funds and In-Kind Donations

Participants are paid for class time. One hour of class is offered on paid release time. The other hour of class is held outside of normal working hours. Staff members have participated in curriculum development (e.g., an employee took photographs of all machines used in the plant, labeled the photographs and listed machine applications, for use in an ESL class). The company also provides photocopying and meeting space for the class.

Additionally the company has a tuition reimbursement program which is available to all employees. The program covers 100% of costs associated with work related courses and 50% of the costs of non-work related courses.

PROJECT DESCRIPTION

Overall Objectives

To improve communications skills of non-native speakers of English and to increase opportunities for internal promotions.

Services/Training Delivered

- description**

ESL

- timing, duration, frequency**

The class ran for 6 months meeting twice a week for two hours per meeting. Classes were held during the last hour of the first shift and the first hour of the second shift. Classes will resume this fall following a summer break.

- location**

On-site

- intended outcomes; definition of completion, success**

Individually based.

- routes of participant entry into program**

In addition to posting notices, supervisors were notified of the program and asked to discuss it with employees. Interested employees took an language assessment test. All who took the assessment chose to participate.

Recipients of Services/Training

- number (total, current, per cycle or period of time)**

12 employees participated in the first class.

- occupation/industry characteristics**

Production workers

Deliverers of Services/Training

The Halton Board of Education, Workplace Education Training (WET) program assisted in program development, provided instruction, monitoring and evaluation.

PROJECT HISTORY AND OPERATION

Origin

CGC is very training conscious. They feel that the workers are very conscientious and that it is important to return something to them. The firm had been considering a workplace education program when they learned through a presentation by the WET program to the Oakville Association of Personnel Managers that workplace education programs were available through the Halton Board of Education.

Changes over time

While the costs of program development and instruction for the first class were completely covered through the WET program, the company will pay 20% of these costs in the future.

Future Plans

This fall the company will continue with the ESL class as well as begin classes in math and blueprint reading.

APPENDIX B
SOURCES OF ASSISTANCE

APPENDIX B

SOURCES OF ASSISTANCE

The following is a list of the types of resources available to small business owners and managers.

TECHNICAL ASSISTANCE AND REFERRALS

State or Local Education Agencies

State departments of education, local boards of education, community and technical colleges frequently have departments of adult or continuing education which provide technical assistance and/or instruction for on-site workplace education programs. These services are often available at no or low cost to the employer. Where such assistance is available, a minimum class size of 10 is generally required. Education agencies which do not offer these services may be able to provide referrals to local service providers.

Community Based Organizations

Community Based Organizations (CBO) have provided education programs for adult learners for many years. CBOs are now beginning provide workplace education programs. The Association for Community Based Education (ACBE), a national organization, can provide advise on how to find local CBOs. For information and a list of ACBE publications contact:

The Association for Community Based Education (ACBE)
1805 Florida Avenue, N.W.
Washington D.C. 20009
202-462-6333

Small Business Development Councils (SBDC)

SBDCs are primarily involved with management assistance, however, some do provide assistance with workplace education programs. All SBDCs are affiliated with a local institution of higher education. Phone numbers of local SBDC offices can be obtained through the local SBA office.

Voluntary Programs

CONTACT Literacy Center is a national literacy hotline. The Center is able to provide listings of all volunteer literacy programs within a fifteen mile radius of locales in the United States. Call 800-228-8813.

Chamber of Commerce

Local Chambers of Commerce may have information about private consultants who are able to assist employers in setting up workplace education programs.

WRITTEN MATERIALS

Business Council for Effective Literacy (BCEL) Newsletter
1221 Avenue of the Americas
New York, New York 10020 (212) 512-2415

BCEL is a national foundation to encourage and assist the involvement of business in promoting adult literacy in the U.S. BCEL publishes a quarterly newsletter which includes sections describing what businesses are doing in the field of education (contact names and numbers are included), and news about written materials useful in setting up workplace education programs.

BCEL has a number of other publications including a short guide for planners of employee programs titled, Job Related Basic Skills and The State Directory of Key Literacy Contacts. A full publication list is available on request to BCEL at the above address.

The Bottom Line: Basic Skills in the Workplace, a joint publication by the U.S. Departments of Labor and Education, provides a brief discussion of workplace education and a guide starting a program. This publication is available from

Workplace Basics: The Skills Employers Want, by Anthony Carnevale et al., describes a broader concept of education and steps to developing a workplace education program. This publication is available from the American Society for Training and Development.

APPENDIX C
BIBLIOGRAPHY

APPENDIX C

BIBLIOGRAPHY

"Alabama Demo Improves Workers' Basic Skills, Self-Confidence," Employment and Training Reporter, Washington, D. C., October 3, 1990, pp. 92-94.

An America That Works: The Life-Cycle Approach to a Competitive Work Force, Committee for Economic Development, Research and Policy Committee, New York, 1990.

Barnow, Burt S., The Education, Training, and Work Experience of Adults in the Labor Force from 1984 to 1995, ICF Inc. Report to the National Commission for Employment Policy, Washington, D. C. 1985.

Becker, Gary S., Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education, National Bureau of Economic Research, New York, 1964.

Bishop, J., On the Job Training in Small Business, U. S. Small Business Administration, Washington, D. C., 1982.

"Business and Education: The Demand for Partnership" in Business Week May 2, 1988.

Business Council for Effective Literacy, "The Large Matter of Small Business," BCEL Newsletter for the Business Community No. 24, New York: BCEL, July 1990.

Business Council for Effective Literacy, "Standardized Tests: Their Use and Misuse," BCEL Newsletter for the Business Community No. 22, New York: BCEL, January 1990.

Business Council for Effective Literacy, "Employers and the Law of Literacy," BCEL Newsletter for the Business Community, No. 17, New York: BCEL, October 1988.

Business Council for Effective Literacy, "Workforce 2000," BCEL Newsletter for the Business Community, No. 16, New York: BCEL, July 1988.

Business Council for Effective Literacy, "Approaching Workforce Literacy," BCEL Newsletter for the Business Community, No. 15, New York: BCEL, April 1988.

Business Council for Effective Literacy, "Unions: Bread, Butter & Basic Skills," BCEL Newsletter for the Business Community, No. 13, New York: BCEL, October 1987.

Business Council for Effective Literacy, "Job-Related Basic Skills," BCEL Newsletter for the Business Community, No. 12, New York: BCEL, July 1987.

Business Council for Effective Literacy, Job-Related Basic Skills: A Guide for Planners of Employee Programs. New York: BCEL, 1987.

Carnevale, Anthony P., Leila J. Gainer, and Ann S. Meltzer, Workplace Basics: The Skills Employers Want, The American Society for Training and Development and the U. S. Department of Labor, Alexandria, VA, 1988.

Carnevale, Anthony P., and Janet W. Johnston, Training America: Strategies for the Nation, National Center on Education and the Economy and the American Society for Training and Development, Alexandria, VA 1989.

Carnevale, Anthony P., and Leila J. Gainer, The Learning Enterprise, American Society for Training and Development, Alexandria, VA, 1989.

Chisman, Forrest P., Jump Start: The Federal Role in Literacy. Southport, CT: The Southport Institute for Policy Analysis, 1989.

Cole, Paul F., "The New American Worker," presented at the New York State Senate Conference on Policy Options and Strategies for Labor Shortages, Buffalo, NY, September 1989.

Commission on the Skills of the American Workforce, America's Choice: high skills or Low Wages! National Center on Education and the Economy, Rochester NY, June 1990.

"Companies Step In Where the Schools Fail," New York Times, September 26, 1989.

Committee on the Effective Implementation of Advanced Manufacturing Technology, Human Resource Practices for Implementing Advanced Manufacturing. Washington DC: National Academy Press, 1986.

Darkenwald, Gordon G., Adult Literacy Education: A Review of the Research and Priorities for Future Inquire, New York: The Literacy Assistance Center, 1986.

Drury, David A., Labor Turnover in Small and Large Firms. For the U.S. Small Business Administration, Office of Advocacy, Berkeley Planning Associates, 1988.

Drake, Rodman, "Management 2000: 'Death of the Gunslinger'" Address at a 1990 conference sponsored by Towers Perrin and the Georgetown University Graduate School of Business, reproduced in Cresap Word-for- Word, 1990.

"Employers See Fewer Qualified New Workers, Skills Dropping, Study Says," Employment and Training Reporter, Washington, D. C., July 13, 1988, pp. 1067-1068.

Fingeret, Arlene, Paper presented to the Literacy Volunteers of America Conference, Albuquerque, NM: 1988.

Fingeret, Arlene and Paul Jurmo, Editors, "Participator Literacy Education". New Directions for Continuing Education No. 42. San Francisco: Jossey-Bass, 1989.

Fiske, Edward B., "Impending U. S. Jobs 'Disaster': Work Force Unqualified to Work," New York Times, September 25, 1989, p. 1.

Frontier College, Diagnosing Literacy Needs in the Workplace, Toronto, Ontario: Frontier College, 1989.

Harman, D. and R, Lerche, The Bottom Line: Basic Skills in the Workplace A Joint Publication of the U. S. Department of Labor and the U. S. Department of Education, 1988.

Johnston, William B., Arnold E. Packer, et al., Workforce 2000: Work and Workers for the Twenty-First Century. Indianapolis: Hudson Institute, June 1987.

Jurmo, Paul, "Workplace Education: Beyond the Quick Fix." Paper presented at "Workplace Education: Today and Tomorrow." Worcester, MA, 1990.

Jurmo, Paul, Bill Wiggernhorn, Arnold Packer, and William Zeigler, "How Can Businesses Fight Workplace Illiteracy?" Training and Development Journal Vol. 43, No. 1, January 1989.

Koen, Susan L., "Functional Illiteracy in Today's Work Force: Employers Are Finding That Gaps in Workers' Education Have Productivity, Health Consequences," Business and Health 5:18-23, January 1988.

Lacy, Dan, "American Business and the Literacy Effort," PIA Communicator, November 1985, pp. 10-12.

Lee, Chris, "Literacy Training: A Hidden Need," Training, September 1986, pp. 64-72.

Lee, Chris, "The Three Rs," Training, October 1989, pp. 67-72.

Lee, Chris, "Basic Training in the Corporate Schoolhouse" Training, April 1988. pp. 27-36.

Levine, Kenneth, The Social Context of Literacy. New York: Routledge and Kegan Paul Inc., 1987.

Lillard, L, and Tan, H. W., "Private Sector Training: Who Gets It and What Are Its Effects?" Rand Corporation Report to the U. S. Department of Labor, Santa Monica, CA, 1986.

Lowman, Donald L, "Compensation and Benefits: Emerging Issues for the '90s," Address at The Conference Board's Human Resources Conference, Los Angeles, May 8, 1990, reprinted in TFP&C Word-for-Word, 1990.

Lytle, Susan L., "From The Inside Out: Reinventing Assessment" Focus on Basics Vol. 2, No. 1, World Education: Boston, MA, Fall 1988.

Marsh, Barbara, "Small Firms' Disadvantage in Hiring Likely to Grow," Wall Street Journal, November 27, 1989, p. B1.

Mikulecky, Larry, Jeanne Ehlinger, and Avis L. Meenan, Training for Job Literacy Demands: What Research Applies to Practice. University Park, PA: Pennsylvania State University, College of Education.

"Most Businesses Provide Training," Employment and Training Reporter Washington, D. C. February 14, 1990, p. 449-450.

National Academy Press, Human Resources Practices for Implementing Advanced Manufacturing Technology, Washington, D. C. 1986.

National Alliance of Business, The Fourth R: Workforce Readiness Washington, D. C., 1987.

National Alliance of Business, Shaping Tomorrow's Workforce: A Leadership Agenda for the 90s, Washington, D. C. 1988.

National Center on Education and the Economy, America's Choice: High Skills or Low Wages, as summarized in Press Release, Rochester, N.Y.: National Center on Education and the Economy, June 1990.

National Commission on Testing and Public Policy, From Gatekeeper to Gateway: Transforming Testing in America, Boston College: National Commission on Testing and Policy, 1990.

Omega Group, Inc, "Literacy in the Workplace: The Executive Perspective," Haverford, PA 1989.

Packer, Arnold, and William B. Johnston, Workforce 2000: Work and Workers for the 21st Century, Hudson Institute Report to the U. S. Department of Labor, Indianapolis, IN, 1987.

Pennar, Karen, "It's Time to Put Our Money Where Our Future Is," (Part of "Special Report: Human Capital: The Decline of America's Work Force,") Business Week, September 19, 1988, pp. 120-121

Piore, Michael J., "The Dual Labor Market: Theory and Implications," in Problems in Political Economy: An Urban Perspective (second edition), David M. Gordon, Ed., Lexington, MA: D.C. Heath and Company, 1977.

Rayman, Paula, Laura Sperazi, and Jan Maier, Assessing Outcomes for Workplace Education Programs: The Perspectives of Adult Learners, Union Members and Managers, Executive Summary. For the Massachusetts Department of Education, Executive Office of Labor and Executive Office of Economic Affairs. Wellesley, MA: Stone Center, Wellesley College, 1989.

Sandler, P.L., Conducting Needs Analysis. Toronto, Ontario: Seneca College, 1987.

Sandler, P.L., Simin Meshginnafas, and J.R. Waley, Solving SPC-Related Communication Problems in Multicultural Workplaces. Toronto, Ontario: Seneca College, 1987.

Sarmiento, Anthony R., "A Labor Perspective on Basic Skills," presented at the Workplace Basic Skills: A Labor Management Approach Conference, Columbus OH, September 1989.

Simon and Company, Employment and Training Opportunities in Small and Large Firms. For the U.S. Small Business Administration. Washington, DC: U.S. Government Printing Office, 1988.

Stein, Sondra G., "Workplace Literacy and the Transformation of the American Workplace: A Model for Effective Practice," Paper Prepared for Statewide Conference, Massachusetts' Commonwealth Literacy Campaign, Boston, MA, 1990.

Sticht, Thomas G., "Adult Literacy Education." E. Rothkopf (Ed.), Review of Research in Education, Vol. 15. Washington DC: American Educational Research Association, 1988.

Sticht, Thomas G., Testing and Assessment in Adult Basic Education and English as a Second Language Programs. San Diego, CA.: Applied Behavioral and Cognitive Sciences, Inc., 1990.

Sticht, Thomas P., "Two Heads Are Better Than One," in BCEL Newsletter for the Business Community, No. 24, New York: BCEL, July 1990.

Street, Brian V., Literacy in Theory and Practice. Cambridge: Cambridge University Press, 1984.

Sum, A., and Berlin, G. "Toward a More Perfect Union: Basic Skills, Poor Families and Our Economic Future, Ford Foundation, New York, 1988.

Taylor, Maurice C. and Glenda R. Lewe, "Basic Skills Training: A Launchpad for Success in the Workplace." Ottawa, Canada: Algonquin College, Adult Basic Education Department, May 1990.

"The Company as Educator: Firms Teach Workers to Read, Write," Washington Post, September 22, 1989.

Towers Perrin and the Hudson Institute, "Workforce 2000: Competing in a Seller's Market: Is Corporate America Prepared?" A Survey Report on Corporate Responses to Demographic and Labor Force Trends, 1990.

U.S. Departments of Labor, Commerce, and Education, Building a Quality Workforce: A Joint Initiative. Washington, DC: U.S. Government Printing Office, July 1988.

U.S. Departments of Labor and Education, The Bottom Line: Basic Skills in the Workplace. Washington DC: U.S. Government Printing Office, 1988.

U.S. Small Business Administration, Office of Advocacy, Workplace Literacy: Targeting the Future. Washington, DC: U.S. Government Printing Office, 1988.

U. S. Small Business Administration, "Job Training in Small and Large Firms." Washington, D. C., 1988.

U. S. Small Business Administration, The State of Small Business: A Report to the President, Washington, D. C. 1989.